

THE  
**NAUTICAL ALMANAC**

AND  
**ASTRONOMICAL EPHEMERIS,**

FOR THE YEAR

**1839.**

PUBLISHED BY ORDER OF THE  
LORDS COMMISSIONERS OF THE ADMIRALTY,  
**LONDON.**

**NEW-YORK:**  
**RE-PUBLISHED BY FRYE & SHAW,**

SUCCESSORS TO JOHN H. WHEELER,  
AT THEIR NAVIGATION WAREHOUSE, 222 WATER-STREET,  
CORNER OF BEEKMAN.

Where they offer for sale, a large assortment of Improved Charts and Nautical Books, with a great variety of Metal Sextants, Repeating Circles, Artificial Horizons; every description of Quadrants and Compasses in use, on hand, and made to order; a large assortment of Day and Night Telescopes of excellent quality, at very low prices.

Ship Chandlers and Dealers in Nautical Instruments and Charts, supplied on better terms, than they have hitherto been by any other persons in the United States.

Every description of Mathematical Instruments repaired with accuracy, and on moderate terms, being attended to by the Principals.

Second hand Mathematical Instruments, bought, sold, and exchanged.

**G. VALE,**  
OF NAVIGATION IN ALL ITS BRANCHES,  
No. 84 ROOSEVELT-STREET.

1838.

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1838.

# ADVERTISEMENT.

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The London Edition of the Nautical Almanac for 1839, has been very much enlarged and improved; from which we have selected all that is necessary to satisfy the demands of the Navigator. All the articles are given for *Mean Time*, except the place of the Sun at the time of his transit over the meridian, which is necessarily given for *Apparent Time*.

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## LONGITUDE.

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### CHRONOMETERS.

The Seaman knows that his Latitude is sure. To know also that his Longitude is correct, is the strongest feeling of his heart—except his love to his wife and bairns.

B. & S. DEMILT,

*No. 239 Pearl-street, facing Burling Slip,*

ESTABLISHED THE FIRST IN NEW-YORK CITY,

### AN ASTRONOMICAL OBSERVATORY.

With Instruments for obtaining the correct time by Solar and Sidereal Transits. Besides possessing a sufficiency of Science for this purpose, they have the Mechanical knowledge and experience to Repair and correct Chronometers.

They have Chronometers to sell.

They have Chronometers to loan.

They repair, adjust, and rate Chronometers.

They are agents for the sale of

**Parkinson & Frodsham's Chronometers,**

And can say, from their own experience, that the Chronometers of Parkinson & Frodsham are more safe—more to be depended on, than any other of the same number which have come into their hands.

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### CHRONOMETERS.


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SIMON WILLARD, JUN.

### ASTRONOMICAL OBSERVATORY,

*No. 9 Congress-street, Boston.*

Where Chronometers are repaired, cleaned, and accurately rated, by Solar and Sidereal Transits.

 CHRONOMETERS from the most eminent makers for sale on the most favourable terms.

## ECLIPSES OF THE SUN.

In the year 1839 there will be only two Eclipses, both of the Sun.

I.—A Total Eclipse of the SUN, March 14—15, 1839, visible at Greenwich.

Begins on the Earth generally March 14<sup>d</sup> 23<sup>h</sup> 34<sup>m</sup>.3, Mean Time at Greenwich,  
 in Longitude 82° 38' W. of Greenwich, and Latitude 31° 16' S.  
 Central and Total Eclipse begins generally March 15<sup>d</sup> 0<sup>h</sup> 30<sup>m</sup>.1  
 in Longitude 96° 37' W. of Greenwich, and Latitude 32° 24' S.  
 Central and Total Eclipse at Noon March 15<sup>d</sup> 2<sup>h</sup> 10<sup>m</sup>.0.  
 in Longitude 30° 13' W. of Greenwich, and Latitude 5° 59' S.  
 Central and Total Eclipse ends generally March 15<sup>d</sup> 3<sup>h</sup> 56<sup>m</sup>.5.  
 in Longitude 32° 6' E. of Greenwich, and Latitude 25° 55' N.  
 Ends on the Earth generally March 15<sup>d</sup> 4<sup>h</sup> 52<sup>m</sup>.2.  
 in Longitude 18° 5' E. of Greenwich, and Latitude 27° 3' N.

At Greenwich a Partial Eclipse only is visible.

Begins - - -	March 15 <sup>d</sup>	3 <sup>h</sup> 23 <sup>m</sup> .4	} Mean Time at Greenwich.
Greatest Phase	-----	3 43 '9	
Ends - - - -	-----	4 4 '4	

Magnitude of the Eclipse (Sun's diameter = 1) 0.05, on the southern Limb.

Angle from North Pole of	{	first contact	164°	}	towards the East.
		last contact	127°		
Angle from vertex of - -	{	first contact	131°	}	
		last contact	94°		

II.—An Annular Eclipse of the SUN, Sept. 7, 1839, invisible at Greenwich.

Begins on the Earth generally Sept. 7<sup>d</sup> 7<sup>h</sup> 24<sup>m</sup>.1, Mean Time at Greenwich,  
 in Longitude 154° 29' E. of Greenwich and Latitude 33° 14' N.  
 Central and Annular Eclipse begins generally Sept. 7<sup>d</sup> 8<sup>h</sup> 28<sup>m</sup>.9,  
 in Longitude 137° 50' E. of Greenwich and Latitude 35° 59' N.  
 Central and Annular Eclipse at Noon Sept. 7<sup>d</sup> 10<sup>h</sup> 14<sup>m</sup>.4,  
 in Longitude 154° 7' W. of Greenwich and Latitude 14° 49' N.  
 Central and Annular Eclipse ends generally Sept. 7<sup>d</sup> 12<sup>h</sup> 16<sup>m</sup>.3  
 in Longitude 96° 55' W. of Greenwich and Latitude 20° 50' S.  
 Ends on the Earth generally Sept. 7<sup>d</sup> 13<sup>h</sup> 21<sup>m</sup>.2,  
 in Longitude 113° 28' W. of Greenwich and Latitude 23° 35' S.

ELEMENTS OF THE ECLIPSES OF THE SUN.

1839.	March 14—15.	September 7.
Greenwich Mean Time of $\odot$ in R. A. - - -	d h m s 15 2 10 2.6 ○ / //	h m s 10 14 24.6 ○ / //
$\text{D}$ 's Declination - - - - -	S. 2 19 6.3	N. 6 13 26.3
$\odot$ 's Declination - - - - -	S. 2 15 11.1	N. 6 5 9.1
$\text{D}$ 's Horary Motion in R. A. - - - - -	33 7.7	27 46.2
$\odot$ 's Horary Motion in R. A. - - - - -	2 17.1	2 15.3
$\text{D}$ 's Horary Motion in Declination - - - - -	N. 18 5.4	S. 14 40.1
$\odot$ 's Horary Motion in Declination - - - - -	N. 0 59.2	S. 0 56.3
$\text{D}$ 's Equatorial Horizontal Parallax - - - - -	60 58.1	55 22.6
$\odot$ 's Equatorial Horizontal Parallax - - - - -	8.6	8.5
$\text{D}$ 's True Semidiameter - - - - -	16 36.8	15 5.4
$\odot$ 's True Semidiameter - - - - -	16 5.6	15 54.2

## PHASES OF THE MOON FOR 1839.

JANUARY.				JULY.			
	d.	h.	m.		d.	h.	m.
☾ Last Quarter . . .	7	9	4.7	☾ Last Quarter . . .	3	17	14.2
☉ New Moon . . . . .	15	2	53.3	☉ New Moon . . . . .	10	11	1.4
☽ First Quarter . . .	21	23	17.8	☽ First Quarter . . .	18	3	1.8
☾ Full Moon . . . . .	29	3	40.8	☾ Full Moon . . . . .	25	23	25.9
FEBRUARY.				AUGUST.			
	d.	h.	m.		d.	h.	m.
☾ Last Quarter . . . .	6	6	40.6	☾ Last Quarter . . . .	1	21	48.9
☉ New Moon . . . . .	13	15	28.3	☉ New Moon . . . . .	8	21	18.6
☽ First Quarter . . . .	20	7	49.7	☽ First Quarter . . . .	16	20	37.6
☾ Full Moon . . . . .	27	20	35.5	☾ Full Moon . . . . .	24	9	37.7
				☾ Last Quarter . . . .	31	2	47.8
MARCH.				SEPTEMBER.			
	d.	h.	m.		d.	h.	m.
☾ Last Quarter . . . .	8	1	31.7	☉ New Moon . . . . .	7	10	21.1
☉ New Moon . . . . .	15	2	12.7	☽ First Quarter . . . .	15	13	59.5
☽ First Quarter . . . .	21	17	28.5	☾ Full Moon . . . . .	22	19	9.8
☾ Full Moon . . . . .	29	14	18.8	☾ Last Quarter . . . .	29	9	43.6
APRIL.				OCTOBER.			
	d.	h.	m.		d.	h.	m.
☾ Last Quarter . . . .	6	16	33.1	☉ New Moon . . . . .	7	2	13.4
☉ New Moon . . . . .	13	11	17.8	☽ First Quarter . . . .	15	6	24.7
☽ First Quarter . . . .	20	4	53.8	☾ Full Moon . . . . .	22	4	31.9
☾ Full Moon . . . . .	28	7	24.5	☾ Last Quarter . . . .	28	20	0.2
MAY.				NOVEMBER.			
	d.	h.	m.		d.	h.	m.
☾ Last Quarter . . . .	6	3	42.7	☉ New Moon . . . . .	5	20	11.4
☉ New Moon . . . . .	12	19	10.4	☽ First Quarter . . . .	13	21	12.8
☽ First Quarter . . . .	19	18	26.8	☾ Full Moon . . . . .	20	14	13.2
☾ Full Moon . . . . .	27	22	45.4	☾ Last Quarter . . . .	27	10	25.9
JUNE.				DECEMBER.			
	d.	h.	m.		d.	h.	m.
☾ Last Quarter . . . .	4	11	36.8	☉ New Moon . . . . .	5	15	0.7
☉ New Moon . . . . .	11	2	42.0	☽ First Quarter . . . .	13	9	48.4
☽ First Quarter . . . .	18	10	1.2	☾ Full Moon . . . . .	20	0	44.5
☾ Full Moon . . . . .	26	12	0.0	☾ Last Quarter . . . .	27	4	45.4

## AT APPARENT NOON.

MEAN  
TIME.

## THE SUN'S

THE  
MOON'S

Day of the Week.	Day of the Month.	THE SUN'S										Equation of Time, to be added to	THE MOON'S		
		Apparent Rt. Ascen.		Diff. for 1 h.	Apparent Declination.		Diff. for 1 h.	Semidi- ameter.	Apparent Time.	Diff. for 1 h.	Age.	Meri- dian Pas- sage.			
		h	m s	s	°	' "	"						' "	m s	s
Tu.	1	18 45	32.52	11.0	S.23	2 58.0	12.6	16 17.3	3 43.29	1.177	15.5	13 55			
We.	2	18 49	57.38	11.0	22 57	55.8	13.7	16 17.3	4 11.52	1.163	16.5	14 44			
Th.	3	18 54	21.92	11.0	22 52	26.3	14.9	16 17.3	4 39.43	1.147	17.5	15 28			
Fri.	4	18 58	46.09	11.0	22 46	29.5	16.0	16 17.3	5 6.97	1.131	18.5	16 10			
Sat.	5	19 3	9.86	11.0	22 40	5.6	17.1	16 17.2	5 34.12	1.113	19.5	16 49			
Sun.	6	19 7	33.22	11.0	22 33	14.7	18.2	16 17.2	6 0.84	1.095	20.5	17 28			
Mo.	7	19 11	56.14	10.9	22 25	57.0	19.4	16 17.2	6 27.13	1.075	21.5	18 8			
Tu.	8	19 16	18.57	10.9	22 18	12.7	20.4	16 17.1	6 52.94	1.055	22.5	18 49			
We.	9	19 20	40.51	10.9	22 10	2.1	21.5	16 17.1	7 18.25	1.033	23.5	19 33			
Th.	10	19 25	1.93	10.9	22 1	25.4	22.6	16 17.0	7 43.04	1.010	24.5	20 21			
Fri.	11	19 29	22.80	10.8	21 52	22.8	23.7	16 17.0	8 7.28	0.987	25.5	21 13			
Sat.	12	19 33	43.10	10.8	21 42	54.6	24.7	16 16.9	8 30.96	0.961	26.5	22 9			
Sun.	13	19 38	2.80	10.8	21 33	1.0	25.8	16 16.8	8 54.03	0.935	27.5	23 8			
Mo.	14	19 42	21.85	10.8	21 22	42.5	26.8	16 16.8	9 16.46	0.908	28.5	♂			
Tu.	15	19 46	40.25	10.7	21 11	59.3	27.8	16 16.7	9 38.24	0.880	29.5	0 7			
We.	16	19 50	57.98	10.7	21 0	51.6	28.8	16 16.6	9 59.35	0.850	0.9	1 4			
Th.	17	19 55	15.00	10.7	20 49	19.9	29.8	16 16.6	10 19.76	0.820	1.9	1 56			
Fri.	18	19 59	31.30	10.6	20 37	24.5	30.8	16 16.5	10 39.45	0.789	2.9	2 49			
Sat.	19	20 3	46.85	10.6	20 25	5.6	31.8	16 16.4	10 58.39	0.758	3.9	3 37			
Sun.	20	20 8	1.65	10.6	20 12	23.7	32.7	16 16.3	11 16.59	0.726	4.9	4 25			
Mo.	21	20 12	15.67	10.6	19 59	19.2	33.6	16 16.2	11 34.01	0.694	5.9	5 14			
Tu.	22	20 16	28.92	10.5	19 45	52.3	34.5	16 16.1	11 50.66	0.660	6.9	6 4			
We.	23	20 20	41.37	10.5	19 32	3.4	35.4	16 16.0	12 6.51	0.627	7.9	6 57			
Th.	24	20 24	53.01	10.5	19 17	53.0	36.3	16 15.9	12 21.55	0.593	8.9	7 53			
Fri.	25	20 29	3.83	10.4	19 3	21.4	37.2	16 15.8	12 35.77	0.559	9.9	8 52			
Sat.	26	20 33	13.84	10.4	18 48	29.1	38.0	16 15.7	12 49.18	0.525	10.9	9 52			
Sun.	27	20 37	23.02	10.3	18 33	16.3	38.9	16 15.6	13 1.77	0.490	11.9	10 50			
Mo.	28	20 41	31.39	10.3	18 17	43.5	39.7	16 15.5	13 13.54	0.456	12.9	11 45			
Tu.	29	20 45	38.93	10.3	18 1	51.0	40.5	16 15.3	13 24.48	0.422	13.9	12 35			
We.	30	20 49	45.64	10.2	17 45	39.3	41.3	16 15.2	13 34.61	0.388	14.9	13 22			
Th.	31	20 53	51.53	10.2	17 29	8.6	42.1	16 15.0	13 43.92	0.354	15.9	14 4			
Fri.	32	20 57	56.59		S.17	12 19.4		16 14.9	13 52.41		16.9	14 45			

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.	THE MOON'S							
		Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.]	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn:
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Tu.	1	15 29.2	15 23.7	56 49.8	56 29.9	8 7 22	8 34 46	24 39 46N.	22 51 4N.
We.	2	15 18.4	15 13.1	56 10.2	55 50.9	9 1 5	9 26 19	20 46 50	18 29 47
Th.	3	15 8.2	15 3.5	55 32.8	55 15.7	9 50 35	10 13 57	16 2 20	13 26 46
Fri.	4	14 59.3	14 55.6	55 0.1	54 46.5	10 36 34	10 58 33	10 45 4	7 59 0
Sat.	5	14 52.4	14 49.8	54 34.7	54 25.2	11 20 3	11 41 12	5 10 6N.	2 19 45N.
Sun.	6	14 47.8	14 46.6	54 18.0	54 13.4	12 2 8	12 23 1	0 30 50S.	3 20 28S.
Mo.	7	14 46.0	14 46.2	54 11.5	54 12.3	12 43 58	13 5 7	6 8 4	8 52 30
Tu.	8	14 47.2	14 48.8	54 15.8	54 21.8	13 26 36	13 48 35	11 32 36	14 7 9
We.	9	14 51.2	14 54.3	54 30.5	54 41.7	14 11 9	14 34 27	16 34 45	18 53 51
Th.	10	14 57.9	15 2.1	54 55.2	55 10.6	14 58 34	15 23 36	21 2 47	22 59 37
Fri.	11	15 6.9	15 12.1	55 28.0	55 47.0	15 49 36	16 16 35	24 42 16	26 8 34
Sat.	12	15 17.5	15 23.2	56 7.0	56 27.8	16 44 31	17 13 19	27 16 15	28 3 13
Sun.	13	15 29.0	15 34.8	56 49.1	57 10.4	17 42 49	18 12 50	28 27 29	28 27 35
Mo.	14	15 40.5	15 45.9	57 31.3	57 51.3	18 43 8	19 13 26	28 2 30	27 11 58
Tu.	15	15 51.1	15 55.9	58 10.3	58 27.7	19 43 32	20 13 11	25 56 22	24 16 49
We.	16	16 0.1	16 3.6	58 43.1	58 56.2	20 42 16	21 10 40	22 15 2	19 53 13
Th.	17	16 6.7	16 9.1	59 7.4	59 16.2	21 38 22	22 5 23	17 13 55	14 19 55
Fri.	18	16 10.8	16 11.9	59 22.4	59 26.5	22 31 46	22 57 38	11 14 4	7 59 16
Sat.	19	16 12.4	16 12.3	59 28.3	59 28.0	23 23 6	23 48 18	4 38 21S.	1 14 6S.
Sun.	20	16 11.7	16 10.7	59 26.0	59 22.3	0 13 25	0 38 35	2 10 48N.	5 33 39N.
Mo.	21	16 9.4	16 7.7	59 17.4	59 11.2	1 3 57	1 29 41	8 51 54	12 2 58
Tu.	22	16 5.8	16 3.6	59 4.2	58 56.1	1 55 55	2 22 46	15 4 17	17 53 15
We.	23	16 1.1	15 58.5	58 47.1	58 37.5	2 50 18	3 18 34	20 27 20	22 44 0
Th.	24	15 55.7	15 52.8	58 27.2	58 16.4	3 47 35	4 17 15	24 40 52	26 15 45
Fri.	25	15 49.6	15 46.2	58 4.6	57 52.3	4 47 29	5 18 3	27 26 50	28 12 48
Sat.	26	15 42.7	15 38.9	57 39.3	57 25.4	5 48 45	6 19 19	28 32 54	28 27 8
Sun.	27	15 35.0	15 30.9	57 11.2	56 56.3	6 49 29	7 19 2	27 56 9	27 1 17
Mo.	28	15 26.8	15 22.6	56 41.2	56 25.7	7 47 47	8 15 37	25 44 22	24 7 39
Tu.	29	15 18.4	15 14.2	56 10.2	55 54.7	8 42 27	9 8 18	22 13 33	20 4 36
We.	30	15 10.0	15 6.0	55 39.3	55 24.6	9 33 10	9 57 9	17 43 17	15 11 58
Th.	31	15 2.1	14 58.6	55 10.6	54 57.5	10 20 21	10 42 51	12 32 49	9 47 51N.
Fri.	32	14 55.3	14 52.4	54 45.4	54 34.7	11 4 47		6 58 50N.	

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.			P.L. of Diff.	IIh.			P.L. of Diff.	VIh.			P.L. of Diff.	IXh.			P.L. of Diff.
		°	'	"		°	'	"		°	'	"		°	'	"	
1	Aldebaran W.	52	3	30	2733	53	39	26	2743	55	15	9	2752	56	50	40	2761
	Pollux W.	8	3	6	2745	9	38	46	2724	11	14	54	2716	12	51	13	2715
	Mars E.	56	29	41	2729	54	53	39	2743	53	17	56	2756	51	42	30	2770
	Jupiter E.	78	19	40	2662	76	42	9	2675	75	4	56	2689	73	28	1	2702
	Spica ☿ E.	83	2	12	2624	81	23	50	2638	79	45	47	2651	78	8	1	2665
2	Aldebaran W.	64	44	53	2816	66	19	0	2828	67	52	52	2839	69	26	29	2852
	Pollux W.	20	51	35	2753	22	27	5	2763	24	2	21	2775	25	37	21	2786
	Mars E.	43	49	59	2841	42	16	24	2855	40	43	7	2870	39	10	9	2884
	Jupiter E.	65	27	59	2771	63	52	53	2785	62	18	5	2798	60	43	34	2812
	Spica ☿ E.	70	3	46	2732	68	27	49	2746	66	52	10	2760	65	16	50	2772
	Saturn E.	113	56	52	2801	112	22	25	2813	110	48	14	2826	109	14	20	2838
3	Aldebaran W.	77	10	46	2911	78	42	51	2922	80	14	42	2934	81	46	18	2946
	Pollux W.	33	28	32	2846	35	2	0	2859	36	35	12	2870	38	8	9	2882
	Mars E.	31	29	49	2955	29	58	40	2969	28	27	48	2984	26	57	15	2998
	Jupiter E.	52	55	27	2879	51	22	41	2891	49	50	11	2905	48	17	58	2917
	Spica ☿ E.	57	24	23	2838	55	50	45	2850	54	17	22	2863	52	44	16	2875
	Saturn E.	101	28	58	2902	99	56	42	2915	98	24	42	2927	96	52	57	2939
4	Sun E.	138	3	10	3245	136	37	54	3256	135	12	51	3268	133	48	2	3279
	Pollux W.	45	49	17	2937	47	20	49	2947	48	52	8	2957	50	23	15	2966
	Regulus W.	9	12	50	3031	10	42	24	3016	12	12	17	3010	13	42	17	3010
	Jupiter E.	40	40	47	2978	39	10	6	2989	37	39	39	3000	36	9	26	3011
	Spica ☿ E.	45	2	29	2932	43	30	51	2942	41	59	25	2953	40	28	13	2962
	Saturn E.	89	17	57	2996	87	47	39	3006	86	17	34	3017	84	47	42	3027
5	Sun E.	126	47	18	3335	125	23	47	3346	124	0	29	3357	122	37	23	3367
	Pollux W.	57	55	57	3009	59	25	58	3017	60	55	49	3024	62	25	32	3030
	Regulus W.	21	11	54	3026	22	41	34	3032	24	11	7	3037	25	40	34	3042
	Jupiter E.	28	41	44	3064	27	12	50	3075	25	44	10	3086	24	15	43	3096
	Spica ☿ E.	32	55	5	3005	31	24	58	3014	29	55	3	3021	28	25	16	3028
	Saturn E.	77	21	21	3072	75	52	37	3080	74	24	3	3088	72	55	39	3095
6	Antares E.	78	49	7	3006	77	19	1	3014	75	49	5	3021	74	19	18	3027
	Sun E.	115	44	36	3412	114	22	33	3419	113	0	38	3427	111	38	52	3433
	Pollux W.	69	52	17	3057	71	21	19	3061	72	50	16	3065	74	19	9	3068
	Regulus W.	33	6	23	3064	34	35	17	3067	36	4	7	3069	37	32	54	3072
	Saturn E.	65	35	38	3126	64	8	0	3130	62	40	27	3134	61	12	59	3138
	Antares E.	66	52	14	3054	65	23	8	3058	63	54	7	3062	62	25	11	3065
7	Sun E.	104	51	47	3462	103	30	40	3466	102	9	38	3469	100	48	39	3472
	Pollux W.	81	42	52	3075	83	11	32	3075	84	40	12	2075	86	8	52	3074
	Regulus W.	44	56	13	3078	46	24	49	3078	47	53	26	3078	49	22	3	3076
	Saturn E.	53	56	45	3153	52	29	39	3155	51	2	36	3157	49	35	35	3158
	Antares E.	55	1	12	3072	53	32	28	3073	52	3	45	3072	50	35	1	3071
	Sun E.	94	4	28	3480	92	43	41	3480	91	22	55	3479	90	2	8	3479
8	Regulus W.	56	45	44	3063	58	14	39	3059	59	43	39	3055	61	12	44	3049
	Mars W.	27	34	23	3170	29	1	8	3163	30	28	1	3157	31	55	1	3151
	Saturn E.	42	20	41	3160	40	53	44	3159	39	26	46	3159	37	59	48	3159
	Antares E.	43	10	53	3059	41	41	53	3055	40	12	48	3051	38	43	35	3046
	Sun E.	83	17	44	3465	81	56	41	3461	80	35	33	3456	79	14	20	3451

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Day of the Month.	Star's Name and Position.		Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
1	Aldebaran	W.	58 25 59	2772	60 1 3	2782	61 35 54	2793	63 10 31	2804
	Pollux	W.	14 27 33	2718	16 3 49	2725	17 39 56	2733	19 15 52	2743
	Mars	E.	50 7 23	2785	48 32 35	2798	46 58 4	2813	45 23 53	2826
	Jupiter	E.	71 51 24	2716	70 15 5	2730	68 39 5	2744	67 3 23	2757
	Spica ♀	E.	76 30 34	2678	74 53 24	2692	73 16 33	2705	71 40 0	2719
2	Aldebaran	W.	70 59 50	2863	72 32 57	2875	74 5 48	2886	75 38 25	2898
	Pollux	W.	27 12 7	2799	28 46 36	2810	30 20 51	2823	31 54 49	2835
	Mars	E.	37 37 29	2898	36 5 7	2912	34 33 3	2926	33 1 17	2940
	Jupiter	E.	59 9 22	2826	57 35 28	2838	56 1 50	2852	54 28 30	2866
	Spica ♀	E.	63 41 46	2785	62 6 59	2799	60 32 30	2812	58 58 18	2825
	Saturn	E.	107 40 42	2852	106 7 21	2865	104 34 17	2878	103 1 30	2890
3	Aldebaran	W.	83 17 39	2957	84 48 46	2968	86 19 39	2979	87 50 18	2990
	Pollux	W.	39 40 51	2893	41 13 19	2905	42 45 32	2916	44 17 31	2926
	Mars	E.	25 27 0	3013	23 57 4	3029	22 27 27	3044	20 58 9	3061
	Jupiter	E.	46 46 1	2930	45 14 20	2942	43 42 54	2954	42 11 43	2966
	Spica ♀	E.	51 11 25	2887	49 38 49	2898	48 6 28	2910	46 34 22	2920
	Saturn	E.	95 21 28	2951	93 50 14	2962	92 19 14	2974	90 48 29	2985
	Sun	E.	132 23 26	3291	130 59 4	3303	129 34 56	3313	128 11 0	3325
4	Pollux	W.	51 54 10	2976	53 24 53	2985	54 55 25	2993	56 25 46	3001
	Regulus	W.	15 12 18	3010	16 42 19	3013	18 12 16	3017	19 42 8	3022
	Jupiter	E.	34 39 27	3022	33 9 42	3032	31 40 9	3043	30 10 50	3054
	Spica ♀	E.	38 57 12	2972	37 26 24	2981	35 55 47	2989	34 25 21	2997
	Saturn	E.	83 18 3	3037	81 48 36	3046	80 19 20	3055	78 50 15	3064
	Sun	E.	121 14 29	3376	119 51 45	3386	118 29 12	3394	117 6 49	3403
5	Pollux	W.	63 55 7	3036	65 24 35	3043	66 53 55	3048	68 23 9	3052
	Regulus	W.	27 9 55	3046	28 39 11	3051	30 8 20	3056	31 37 24	3060
	Jupiter	E.	22 47 29	3107	21 19 28	3120	19 51 43	3133	18 24 13	3147
	Spica ♀	E.	26 55 38	3033	25 26 6	3039	23 56 42	3044	22 27 24	3050
	Saturn	E.	71 27 23	3102	69 59 16	3108	68 31 16	3114	67 3 23	3120
	Antares	E.	72 49 39	3033	71 20 7	3039	69 50 43	3044	68 21 25	3050
	Sun	E.	110 17 13	3440	108 55 42	3447	107 34 18	3452	106 13 0	3456
6	Pollux	W.	75 47 58	3069	77 16 45	3072	78 45 29	3074	80 14 11	3074
	Regulus	W.	39 1 38	3074	40 30 19	3076	41 58 58	3077	43 27 36	3078
	Saturn	E.	59 45 36	3143	58 18 18	3146	56 51 4	3148	55 23 53	3151
	Antares	E.	60 56 18	3068	59 27 29	3069	57 58 42	3070	56 29 56	3072
	Sun	E.	99 27 44	3475	98 6 52	3477	96 46 2	3479	95 25 14	3480
7	Pollux	W.	87 37 34	3073	89 6 17	3070	90 35 3	3068	92 3 52	3065
	Regulus	W.	50 50 42	3074	52 19 23	3072	53 48 7	3069	55 16 54	3067
	Saturn	E.	48 8 35	3158	46 41 36	3158	45 14 37	3159	43 47 39	3159
	Antares	E.	49 6 16	3070	47 37 30	3068	46 8 41	3065	44 39 49	3062
	Sun	E.	88 41 20	3477	87 20 30	3475	85 59 38	3472	84 38 42	3469
8	Regulus	W.	62 41 56	3043	64 11 15	3038	65 40 41	3031	67 10 15	3025
	Mars	W.	33 22 9	3143	34 49 27	3136	36 16 53	3128	37 44 29	3120
	Saturn	E.	36 32 50	3159	35 5 52	3160	33 38 55	3161	32 11 59	3162
	Antares	E.	37 14 22	3040	35 44 59	3034	34 15 29	3027	32 45 50	3021
	Sun	E.	77 53 1	3446	76 31 36	3439	75 10 3	3432	73 48 23	3425

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Day of the Month.	Star's Name and Position.		Noon.	P. L. of Diff.	IIIh.	P. L. of Diff.	VIh.	P. L. of Diff.	IXh.	P. L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
9	Regulus	W.	68 39 57	3017	70 9 48	3010	71 39 48	3002	73 9 59	2993
	Mars	W.	39 12 14	3111	40 40 10	3102	42 8 17	3093	43 36 35	3084
	Jupiter	W.	18 55 44	3096	20 23 59	3081	21 52 32	3067	23 21 22	3053
	Saturn	E.	30 45 4	3164	29 18 12	3167	27 51 24	3172	26 24 41	3179
	Antares	E.	31 16 4	3014	29 46 9	3007	28 16 5	2999	26 45 51	2990
	Sun	E.	72 26 35	3417	71 4 38	3409	69 42 32	3401	68 20 16	3391
10	Mars	W.	51 1 10	3030	52 30 45	3018	54 0 35	3006	55 20 40	2994
	Jupiter	W.	30 49 35	2989	32 20 2	2977	33 50 44	2964	35 21 42	2950
	Spica $\Upsilon$	W.	26 42 15	2941	28 13 42	2931	29 45 21	2920	31 17 15	2908
	Antares	E.	19 11 49	2942	17 40 23	2931	16 8 44	2920	14 36 50	2909
	Sun	E.	61 26 12	3340	60 2 47	3329	58 39 9	3317	57 15 17	3306
11	Mars	W.	63 5 2	2928	64 36 45	2915	66 8 45	2901	67 41 3	2886
	Jupiter	W.	43 0 46	2883	44 33 27	2869	46 6 25	2855	47 39 42	2841
	Spica $\Upsilon$	W.	39 0 33	2847	40 34 0	2833	42 7 45	2820	43 41 47	2806
	Sun	E.	50 12 25	3242	48 47 5	3229	47 21 30	3215	45 55 38	3202
12	Mars	W.	75 27 13	2813	77 1 24	2798	78 35 55	2782	80 10 46	2767
	Jupiter	W.	55 30 48	2768	57 5 58	2752	58 41 29	2738	60 17 19	2723
	Spica $\Upsilon$	W.	51 36 27	2736	53 12 19	2722	54 48 30	2708	56 25 0	2693
	Sun	E.	38 42 19	3134	37 14 50	3121	35 47 6	3108	34 19 6	3095
17	Sun	W.	24 36 52	2674	26 14 7	2660	27 51 41	2649	29 29 29	2639
	$\alpha$ Arietis	E.	74 59 30	2311	73 13 46	2306	71 27 55	2302	69 41 58	2299
	Aldebaran	E.	105 56 14	2353	104 11 32	2346	102 26 40	2341	100 41 41	2337
18	Sun	W.	37 41 25	2604	39 20 14	2600	40 59 9	2596	42 38 9	2593
	$\alpha$ Arietis	E.	60 51 17	2289	59 5 2	2289	57 18 47	2289	55 32 31	2290
	Aldebaran	E.	91 55 13	2320	90 9 42	2318	88 24 9	2316	86 38 33	2316
19	Sun	W.	50 53 57	2585	52 33 12	2585	54 12 27	2586	55 51 41	2586
	$\alpha$ Arietis	E.	46 41 49	2303	44 55 54	2307	43 10 5	2313	41 24 24	2319
	Aldebaran	E.	77 50 31	2318	76 4 58	2321	74 19 29	2323	72 34 3	2325
20	Sun	W.	64 7 32	2594	65 46 35	2596	67 25 35	2600	69 4 30	2602
	Fomalhaut	W.	38 23 28	2920	39 55 21	2875	41 28 12	2837	43 1 52	2802
	$\alpha$ Arietis	E.	32 38 45	2368	30 54 24	2382	29 10 24	2400	27 26 49	2420
	Aldebaran	E.	63 48 6	2347	62 3 15	2353	60 18 32	2359	58 33 58	2366
21	Sun	W.	77 18 2	2620	78 56 30	2625	80 34 51	2629	82 13 7	2633
	Fomalhaut	W.	50 59 40	2688	52 36 36	2673	54 13 52	2661	55 51 24	2650
	$\alpha$ Pegasi	W.	31 36 18	3401	32 53 33	3304	34 22 40	3219	35 48 27	3147
	Aldebaran	E.	49 53 55	2410	48 10 35	2421	46 27 30	2433	44 44 43	2446
	Pollux	E.	92 37 42	2287	90 51 23	2291	89 5 10	2295	87 19 3	2299
22	Sun	W.	90 22 53	2658	92 0 30	2663	93 38 0	2668	95 15 23	2673
	Fomalhaut	W.	64 2 7	2616	65 40 40	2614	67 19 16	2611	68 57 56	2610
	$\alpha$ Pegasi	W.	43 15 39	2909	44 47 47	2878	46 20 34	2852	47 53 55	2828
	Aldebaran	E.	36 16 9	2538	34 35 48	2563	32 56 2	2591	31 16 55	2624
	Pollux	E.	78 30 6	2322	76 44 39	2327	74 59 19	2333	73 14 7	2337
23	Sun	W.	103 20 27	2702	104 57 5	2708	106 33 35	2714	108 9 57	2720
	Fomalhaut	W.	77 11 26	2612	78 50 4	2615	80 28 39	2618	82 7 9	2621
	$\alpha$ Pegasi	W.	55 46 59	2751	57 22 31	2742	58 58 15	2734	60 34 10	2728

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			° ' "		° ' "		° ' "		° ' "	
9	Regulus	W.	74 40 20	2984	76 10 53	2975	77 41 37	2965	79 12 34	2955
	Mars	W.	45 5 4	3074	46 33 46	3064	48 2 40	3052	49 31 48	3041
	Jupiter	W.	24 50 29	3041	26 19 51	3027	27 49 30	3014	29 19 25	3002
	Saturn	E.	24 58 7	3188	23 31 44	3201	22 5 36	3218	20 39 48	3241
	Antares	E.	25 15 26	2981	23 44 50	2972	22 14 2	2962	20 43 2	2952
	Sun	E.	66 57 49	3382	65 35 12	3372	64 12 24	3362	62 49 24	3351
10	Mars	W.	57 1 0	2981	58 31 36	2969	60 2 28	2955	61 33 37	2942
	Jupiter	W.	36 52 57	2937	38 24 29	2924	39 56 17	2910	41 28 23	2897
	Spica $\text{♊}$	W.	32 49 24	2897	34 21 47	2884	35 54 26	2872	37 27 21	2859
	Antares	E.	13 4 42	2898	11 32 20	2885	9 59 42	2873	8 26 48	2861
	Sun	E.	55 51 12	3293	54 26 52	3281	53 2 18	3268	51 37 29	3255
11	Mars	W.	69 13 40	2872	70 46 35	2857	72 19 49	2843	73 53 21	2828
	Jupiter	W.	49 13 17	2826	50 47 11	2811	52 21 24	2797	53 55 56	2782
	Spica $\text{♊}$	W.	45 16 7	2793	46 50 44	2779	48 25 40	2765	50 0 54	2750
	Sun	E.	44 29 31	3188	43 3 7	3174	41 36 27	3161	40 9 31	3148
12	Mars	W.	81 45 57	2753	83 21 27	2738	84 57 17	2723	86 33 27	2707
	Jupiter	W.	61 53 28	2708	63 29 58	2693	65 6 47	2678	66 43 57	2663
	Spica $\text{♊}$	W.	58 1 49	2678	59 38 58	2664	61 16 26	2649	62 54 14	2635
	Sun	E.	32 50 50	3083	31 22 20	3072	29 53 36	3061	28 24 38	3051
17	Sun	W.	31 7 31	2630	32 45 45	2622	34 24 10	2615	36 2 44	2610
	a Arietis	E.	67 55 57	2296	66 9 52	2294	64 23 43	2292	62 37 31	2290
	Aldebaran	E.	98 56 35	2332	97 11 22	2328	95 26 4	2324	93 40 40	2322
18	Sun	W.	44 17 13	2590	45 56 21	2589	47 35 31	2587	49 14 44	2587
	a Arietis	E.	53 46 17	2291	52 0 5	2293	50 13 56	2296	48 27 50	2299
	Aldebaran	E.	84 52 57	2315	83 7 19	2315	81 21 42	2316	79 36 6	2317
19	Sun	W.	57 30 55	2588	59 10 7	2588	60 49 18	2590	62 28 26	2592
	a Arietis	E.	39 38 52	2326	37 53 31	2334	36 8 21	2344	34 23 25	2355
	Aldebaran	E.	70 48 40	2329	69 3 23	2333	67 18 11	2337	65 33 5	2342
20	Sun	W.	70 43 22	2606	72 22 9	2609	74 0 52	2612	75 39 30	2617
	Fomalhaut	W.	44 36 18	2772	46 11 22	2747	47 47 0	2725	49 23 7	2705
	a Arietis	E.	25 43 43	2445	24 1 12	2474	22 19 23	2511	20 38 25	2557
	Aldebaran	E.	56 49 35	2373	55 5 21	2382	53 21 20	2390	51 37 31	2399
21	Sun	W.	83 51 17	2637	85 29 21	2643	87 7 18	2647	88 45 9	2652
	Fomalhaut	W.	57 29 11	2641	59 7 11	2632	60 45 22	2626	62 23 41	2621
	a Pegasi	W.	37 15 40	3084	38 44 9	3031	40 13 43	2984	41 44 16	2944
	Aldebaran	E.	43 2 14	2461	41 20 6	2477	39 38 21	2495	37 57 1	2515
	Pollux	E.	85 33 2	2304	83 47 8	2309	82 1 21	2313	80 15 40	2317
22	Sun	W.	96 52 39	2678	98 29 48	2685	100 6 48	2690	101 43 42	2696
	Fomalhaut	W.	70 36 38	2609	72 15 21	2609	73 54 4	2610	75 32 46	2611
	a Pegasi	W.	49 27 46	2808	51 2 3	2792	52 36 42	2776	54 11 42	2763
	Aldebaran	E.	29 38 33	2662	28 1 2	2707	26 24 31	2759	24 49 9	2822
	Pollux	E.	71 29 2	2343	69 44 5	2348	67 59 15	2353	66 14 32	2359
23	Sun	W.	109 46 11	2726	111 22 16	2732	112 58 13	2738	114 34 2	2746
	Fomalhaut	W.	83 45 35	2626	85 23 55	2630	87 2 9	2636	88 40 15	2641
	a Pegasi	W.	62 10 13	2722	63 46 24	2717	65 22 41	2714	66 59 2	2712

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			°	'	"		°	'	"		°	'	"		°	'	"		°	'	"		°	'	"	
23	Aldebaran	E.	23	15	10	2899	21	42	50	2993	20	12	29	3113	18	44	35	3264								
	Pollux	E.	64	29	58	2364	62	45	31	2370	61	1	13	2375	59	17	2	2381								
24	Sun	W.	116	9	41	2751	117	45	13	2759	119	20	35	2766	120	55	48	2772								
	a Pegasi	W.	68	35	26	2711	70	11	51	2710	71	48	18	2710	73	24	44	2711								
	a Arietis	W.	25	5	54	2569	26	45	33	2555	28	25	30	2547	30	5	38	2540								
	Pollux	E.	50	38	16	2410	48	54	56	2417	47	11	45	2423	45	28	43	2430								
	Regulus	E.	87	25	46	2408	85	42	23	2414	83	59	9	2421	82	16	4	2427								
25	Sun	W.	128	49	36	2809	130	23	52	2817	131	57	58	2825	133	31	54	2833								
	a Pegasi	W.	81	26	21	2725	83	2	28	2730	84	38	28	2735	86	14	22	2741								
	a Arietis	W.	38	27	50	2530	40	8	21	2532	41	48	49	2535	43	29	14	2538								
	Pollux	E.	36	55	54	2464	35	13	50	2470	33	31	55	2478	31	50	11	2486								
	Regulus	E.	73	42	50	2459	72	0	39	2465	70	18	36	2472	68	36	44	2479								
	Mars	E.	105	41	37	2488	104	0	7	2495	102	18	46	2500	100	37	33	2507								
26	a Arietis	W.	51	50	9	2558	53	30	1	2564	55	9	46	2569	56	49	23	2575								
	Aldebaran	W.	22	35	4	3009	24	5	6	2954	25	36	16	2911	27	8	21	2877								
	Regulus	E.	60	9	46	2514	58	28	53	2522	56	48	10	2530	55	7	38	2538								
	Mars	E.	92	13	44	2540	90	33	26	2547	88	53	18	2553	87	13	19	2561								
	Jupiter	E.	110	53	59	2526	109	12	22	2534	107	31	56	2540	105	51	39	2548								
27	a Arietis	W.	65	5	21	2609	66	44	4	2616	68	22	37	2623	70	1	1	2632								
	Aldebaran	W.	34	57	6	2787	36	31	51	2780	38	6	45	2774	39	41	47	2770								
	Regulus	E.	46	47	41	2578	45	8	16	2586	43	29	2	2595	41	50	0	2604								
	Mars	E.	78	55	59	2599	77	17	2	2607	75	38	17	2615	73	59	42	2623								
	Jupiter	E.	97	32	51	2587	95	53	38	2594	94	14	35	2603	92	35	44	2612								
28	a Arietis	W.	78	10	13	2673	79	47	29	2681	81	24	34	2691	83	1	26	2700								
	Aldebaran	W.	47	37	36	2771	49	12	42	2774	50	47	44	2777	52	22	42	2782								
	Regulus	E.	33	37	57	2651	32	0	11	2661	30	22	38	2671	28	45	20	2681								
	Mars	E.	65	49	42	2666	64	12	17	2676	62	35	5	2685	60	58	5	2694								
	Jupiter	E.	84	24	24	2655	82	46	44	2664	81	9	16	2673	79	32	0	2683								
	Spica ♏	E.	87	35	48	2642	85	57	50	2652	84	20	5	2661	82	42	32	2670								
29	Aldebaran	W.	60	15	49	2811	61	50	2	2819	63	24	5	2826	64	57	59	2834								
	Pollux	W.	16	19	41	2750	17	55	15	2755	19	30	42	2760	21	6	2	2767								
	Mars	E.	52	56	15	2743	51	20	32	2753	49	45	3	2763	48	9	47	2775								
	Jupiter	E.	71	28	52	2731	69	52	54	2741	68	17	8	2751	66	41	36	2761								
	Spica ♏	E.	74	37	58	2719	73	1	43	2728	71	25	40	2738	69	49	51	2747								
30	Aldebaran	W.	72	44	53	2876	74	17	43	2884	75	50	22	2894	77	22	48	2903								
	Pollux	W.	29	0	10	2809	30	34	26	2818	32	8	30	2828	33	42	22	2837								
	Mars	E.	40	16	58	2829	38	43	8	2840	37	9	32	2852	35	36	11	2863								
	Jupiter	E.	58	47	15	2812	57	13	3	2823	55	39	5	2833	54	5	20	2844								
	Spica ♏	E.	61	54	0	2798	60	19	30	2808	58	45	13	2819	57	11	10	2828								
	Saturn	E.	108	23	4	2857	106	49	50	2867	105	16	49	2877	103	44	0	2886								
31	Aldebaran	W.	85	2	5	2950	86	33	21	2959	88	4	25	2969	89	35	17	2978								
	Pollux	W.	41	28	41	2884	43	1	21	2893	44	33	49	2903	46	6	4	2911								
	Mars	E.	27	53	25	2928	26	21	42	2944	24	50	19	2961	23	19	17	2978								
	Jupiter	E.	46	19	57	2896	44	47	33	2906	43	15	22	2916	41	43	24	2927								
	Spica ♏	E.	49	24	4	2878	47	51	17	2887	46	18	42	2897	44	46	19	2907								
	Saturn	E.	96	2	58	2935	94	31	23	2944	93	0	0	2953	91	28	48	2963								

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
23	Aldebaran E.	17 19 41	3462	15 58 34	3725	- - -	- - -	- - -	- - -
	Pollux E.	57 33 0	2387	55 49 6	2393	54 5 21	2398	52 21 44	2405
24	Sun W.	123 30 53	2779	124 5 48	2787	125 40 33	2794	127 15 9	2801
	a Pegasi W.	75 1 10	2713	76 37 33	2715	78 13 53	2718	79 50 9	2721
	a Arietis W.	31 45 56	2535	33 26 21	2532	35 6 49	2530	36 47 20	2531
	Pollux E.	43 45 51	2436	42 3 7	2443	40 20 33	2450	38 38 9	2456
	Regulus E.	80 33 8	2433	78 50 20	2439	77 7 41	2445	75 25 11	2452
25	Sun W.	135 5 39	2841	136 39 14	2850	138 12 37	2859	139 45 49	2868
	a Pegasi W.	87 50 8	2747	89 25 46	2753	91 1 15	2761	92 36 34	2769
	a Arietis W.	45 9 35	2540	46 49 52	2544	48 30 4	2549	50 10 9	2553
	Pollux E.	30 8 38	2494	28 27 16	2502	26 46 6	2511	25 5 8	2520
	Regulus E.	66 55 1	2485	65 13 27	2493	63 32 4	2500	61 50 50	2507
	Mars E.	98 56 29	2513	97 15 34	2520	95 34 48	2526	93 54 11	2533
26	a Arietis W.	58 28 52	2581	60 8 13	2588	61 47 25	2594	63 26 28	2601
	Aldebaran W.	28 41 9	2850	30 14 32	2828	31 48 23	2811	33 22 36	2798
	Regulus E.	53 27 17	2545	51 47 6	2553	50 7 6	2561	48 27 18	2569
	Mars E.	85 33 30	2569	83 53 52	2576	82 14 24	2583	80 35 6	2591
	Jupiter E.	104 11 32	2556	102 31 36	2563	100 51 50	2571	99 12 15	2579
27	a Arietis W.	71 39 13	2639	73 17 15	2647	74 55 6	2656	76 32 45	2664
	Aldebaran W.	41 16 54	2768	42 52 4	2766	44 27 16	2767	46 2 27	2769
	Regulus E.	40 11 10	2613	38 32 33	2622	36 54 8	2632	35 15 56	2641
	Mars E.	72 21 19	2632	70 43 7	2641	69 5 7	2649	67 27 19	2658
	Jupiter E.	90 57 5	2620	89 18 37	2629	87 40 21	2637	86 2 16	2646
28	a Arietis W.	84 38 6	2709	86 14 34	2718	87 50 50	2728	89 26 53	2738
	Aldebaran W.	53 57 33	2786	55 32 19	2792	57 6 57	2798	58 41 27	2805
	Regulus E.	27 8 15	2692	25 31 25	2704	23 54 50	2715	22 18 30	2727
	Mars E.	59 21 17	2704	57 44 43	2713	56 8 21	2723	54 32 11	2733
	Jupiter E.	77 54 57	2693	76 18 7	2702	74 41 29	2711	73 5 4	2721
	Spica 𐌶 E.	81 5 12	2679	79 28 4	2689	77 51 9	2699	76 14 27	2708
29	Aldebaran W.	66 31 43	2842	68 5 17	2850	69 38 40	2859	71 11 52	2867
	Pollux W.	22 41 13	2775	24 16 13	2783	25 51 3	2791	27 25 42	2800
	Mars E.	46 34 46	2785	44 59 58	2795	43 25 24	2806	41 51 4	2817
	Jupiter E.	65 6 17	2771	63 31 11	2782	61 56 19	2792	60 21 40	2802
	Spica 𐌶 E.	68 14 14	2758	66 38 51	2768	65 3 41	2778	63 28 44	2788
30	Aldebaran W.	78 55 3	2912	80 27 7	2922	81 58 58	2931	83 30 38	2941
	Pollux W.	35 16 2	2816	36 49 30	2856	38 22 46	2866	39 55 49	2874
	Mars E.	34 3 5	2876	32 30 15	2889	30 57 42	2902	29 25 25	2915
	Jupiter E.	52 31 49	2854	50 58 31	2864	49 25 26	2875	47 52 35	2885
	Spica 𐌶 E.	55 37 19	2838	54 3 41	2848	52 30 16	2858	50 57 3	2869
	Saturn E.	102 11 23	2895	100 38 58	2905	99 6 46	2915	97 34 46	2924
31	Aldebaran W.	91 5 57	2987	92 36 26	2997	94 6 42	3006	95 36 47	3016
	Pollux W.	47 38 9	2921	49 10 1	2930	50 41 42	2938	52 13 13	2947
	Mars E.	21 48 37	2997	20 18 20	3018	18 48 29	3013	17 19 9	3072
	Jupiter E.	40 11 39	2937	38 40 7	2948	37 8 49	2958	35 37 44	2969
	Spica 𐌶 E.	43 14 9	2916	41 42 10	2925	40 10 23	2935	38 38 48	2943
	Saturn E.	89 57 49	2972	88 27 1	2981	86 56 25	2990	85 26 0	3000

AT APPARENT NOON.													MEAN TIME.			
Day of the Week.	Day of the Month.	THE SUN'S							Equation of Time, to be added to Apparent Time.	Diff. for 1 h.	THE MOON'S					
		Apparent Rt. Ascen.	Diff. for 1 h.	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.	Age.	Meri- dian Pas- sage.								
		h	m	s	s	°	'	"	"	'	"	m	s	d	h	m
Fri.	1	20	57	56	59	10	2	S. 17	12	19	4	42	8	16	14	9
Sat.	2	21	2	0	84	10	1	16	55	12	0	13	6	16	14	7
Sun.	3	21	6	4	28	10	1	16	37	46	9	44	3	16	14	6
Mo.	4	21	10	6	91	10	1	16	20	4	3	45	0	16	14	4
Tu.	5	21	14	8	74	10	0	16	2	4	8	45	7	16	14	2
We.	6	21	18	9	77	10	0	15	43	48	6	46	4	16	14	0
Th.	7	21	22	10	01	10	0	15	25	16	2	47	0	16	13	9
Fri.	8	21	26	9	47	9	9	15	6	28	0	47	7	16	13	7
Sat.	9	21	30	8	14	9	9	14	47	24	5	48	3	16	13	5
Sun.	10	21	34	6	04	9	9	14	28	6	0	48	9	16	13	3
Mo.	11	21	38	3	16	9	8	14	8	33	0	49	5	16	13	1
Tu.	12	21	41	59	52	9	8	13	48	45	9	50	0	16	12	9
We.	13	21	45	55	10	9	8	13	28	45	2	50	6	16	12	7
Th.	14	21	49	49	92	9	8	13	8	31	4	51	1	16	12	5
Fri.	15	21	53	43	99	9	7	12	48	4	8	51	6	16	12	3
Sat.	16	21	57	37	32	9	7	12	27	25	8	52	1	16	12	1
Sun.	17	22	1	29	92	9	7	12	6	35	0	52	6	16	11	9
Mo.	18	22	5	21	79	9	6	11	45	32	7	53	1	16	11	7
Tu.	19	22	9	12	96	9	6	11	24	19	4	53	5	16	11	5
We.	20	22	13	3	43	9	6	11	2	55	5	53	9	16	11	3
Th.	21	22	16	53	21	9	5	10	41	21	5	54	3	16	11	1
Fri.	22	22	20	42	33	9	5	10	19	37	7	54	7	16	10	9
Sat.	23	22	24	30	79	9	5	9	57	44	6	55	1	16	10	6
Sun.	24	22	28	18	62	9	5	9	35	42	7	55	4	16	10	4
Mo.	25	22	32	5	84	9	4	9	13	32	1	55	8	16	10	2
Tu.	26	22	35	52	44	9	4	8	51	13	5	56	1	16	9	9
We.	27	22	39	38	46	9	4	8	28	47	1	56	4	16	9	7
Th.	28	22	43	23	92	9	4	8	6	13	3	56	7	16	9	5
Fri.	29	22	47	8	85			S. 7	43	32	5			16	9	2
														12	41	32
															15	4
															13	21

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.	THE MOON'S							
		Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Fri.	1	14 55.3	14 52.4	54 45.4	54 34.7	11 4 47	11 26 17	6 58 50N.	4 7 26N.
Sat.	2	14 49.9	14 47.9	54 25.6	54 18.2	11 47 29	12 8 29	1 15 5N.	1 36 52S.
Sun.	3	14 46.4	14 45.5	54 12.9	54 9.6	12 29 27	12 50 30	4 27 10S.	7 14 37
Mo.	4	14 45.3	14 45.7	54 8.7	54 10.1	13 11 45	13 33 20	9 58 3	12 36 15
Tu.	5	14 46.7	14 48.5	54 14.0	54 20.5	13 55 23	14 18 0	15 8 0	17 31 54
We.	6	14 51.0	14 54.2	54 29.8	54 41.6	14 41 19	15 5 25	19 46 31	21 50 14
Th.	7	14 58.2	15 2.7	54 56.0	55 12.7	15 30 22	15 56 15	23 41 17	25 17 46
Fri.	8	15 7.9	15 13.7	55 31.6	55 53.0	16 23 4	16 50 47	26 37 41	27 38 58
Sat.	9	15 19.9	15 26.5	56 15.9	56 40.1	17 19 20	17 48 34	28 19 39	28 37 55
Sun.	10	15 33.5	15 40.5	57 5.5	57 31.5	18 18 19	18 48 23	28 32 18	28 1 47
Mo.	11	15 47.5	15 54.4	57 57.1	58 22.4	19 18 31	19 48 32	27 5 57	25 44 59
Tu.	12	16 0.9	16 7.0	58 46.4	59 8.7	20 18 12	20 47 24	23 59 48	21 51 53
We.	13	16 12.5	16 17.2	59 28.8	59 46.1	21 16 2	21 44 4	19 23 16	16 36 27
Th.	14	16 21.1	16 24.0	60 0.3	60 11.0	22 11 31	22 38 26	13 34 14	10 19 39
Fri.	15	16 25.9	16 26.8	60 17.9	60 21.2	23 4 55	23 31 5	6 55 51S.	3 26 5S.
Sat.	16	16 26.6	16 25.7	60 20.7	60 17.1	23 57 4	0 23 0	0 6 26N.	3 38 30N.
Sun.	17	16 23.8	16 21.1	60 10.1	60 0.3	0 49 2	1 15 19	7 7 0	10 28 55
Mo.	18	16 17.7	16 13.8	59 47.8	59 33.7	1 41 59	2 9 8	13 41 17	16 41 16
Tu.	19	16 9.6	16 5.1	59 18.2	59 1.6	2 36 51	3 5 12	19 26 9	21 53 25
We.	20	16 0.3	15 55.5	58 44.2	58 26.6	3 34 11	4 3 44	24 0 42	25 45 58
Th.	21	15 50.6	15 45.8	58 8.6	57 50.8	4 33 46	5 4 6	27 7 32	28 4 11
Fri.	22	15 41.0	15 36.3	57 33.2	57 15.9	5 34 33	6 4 53	28 35 16	28 40 47
Sat.	23	15 31.7	15 27.3	56 59.1	56 42.9	6 34 52	7 4 18	28 21 15	27 37 50
Sun.	24	15 23.0	15 18.8	56 27.2	56 11.9	7 33 0	8 0 51	26 32 9	25 6 10
Mo.	25	15 14.8	15 11.0	55 57.1	55 43.0	8 27 46	8 53 45	23 22 2	21 22 4
Tu.	26	15 7.3	15 3.7	55 29.5	55 16.5	9 18 48	9 43 0	19 8 33	16 43 43
We.	27	15 0.4	14 57.3	55 4.2	54 52.8	10 6 24	10 29 7	14 9 40	11 28 25
Th.	28	14 54.5	14 51.8	54 42.4	54 32.8	10 51 15	11 12 56	8 41 47N.	5 51 28N.
Fri.	29	14 49.5	14 47.5	54 24.2	54 16.8				

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.			P.L. of Diff.			IIIh.			P.L. of Diff.			VIh.			P.L. of Diff.			IXh.			P.L. of Diff.		
			°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
1	Pollux	W.	53	44	32	2956	55	15	40	2964	56	46	38	2972	58	17	26	2980								
	Regulus	W.	17	0	2	2975	18	30	41	2984	20	1	14	2989	21	31	41	2994								
	Jupiter	E.	34	6	52	2979	32	36	13	2990	31	5	48	3001	29	35	36	3011								
	Spica ☿	E.	37	7	24	2951	35	36	10	2961	34	5	8	2969	32	34	16	2977								
	Antares	E.	83	1	24	2952	81	30	11	2960	79	59	8	2968	78	28	15	2977								
	Saturn	E.	83	55	47	3009	82	25	45	3017	80	55	53	3026	79	26	12	3034								
2	Pollux	W.	65	49	2	3016	67	18	55	3022	68	48	40	3029	70	18	17	3035								
	Regulus	W.	29	2	10	3023	30	31	51	3030	32	1	30	3035	33	31	0	3039								
	Spica ☿	E.	25	2	19	3013	23	32	23	3019	22	2	34	3026	20	32	54	3032								
	Antares	E.	70	56	19	3013	69	26	22	3020	67	56	34	3026	66	26	53	3031								
	Saturn	E.	72	0	16	3073	70	31	33	3080	69	2	59	3087	67	34	34	3094								
	Sun	E.	136	23	36	3415	135	1	36	3421	133	39	43	3426	132	17	56	3432								
3	Pollux	W.	77	44	44	3058	79	13	45	3062	80	42	41	3065	82	11	33	3069								
	Regulus	W.	40	57	1	3061	42	25	58	3065	43	54	50	3068	45	23	39	3070								
	Antares	E.	59	0	10	3056	57	31	6	3060	56	2	7	3063	54	33	12	3066								
	Saturn	E.	60	14	20	3123	58	46	38	3128	57	19	2	3133	55	51	32	3137								
	Sun	E.	125	30	32	3455	124	9	18	3459	122	48	8	3462	121	27	2	3465								
4	Pollux	W.	89	35	9	3077	91	3	47	3078	92	32	24	3077	94	1	2	3076								
	Regulus	W.	52	47	4	3078	54	15	40	3078	55	44	16	3078	57	12	52	3078								
	Mars	W.	20	58	22	3134	22	25	51	3125	23	53	30	3117	25	21	19	3110								
	Antares	E.	47	9	21	3074	45	40	40	3074	44	11	59	3075	42	43	19	3074								
	Saturn	E.	48	35	14	3156	47	8	12	3158	45	41	13	3162	44	14	18	3164								
	Sun	E.	114	42	9	3472	113	21	14	3472	112	0	19	3472	110	39	24	3472								
5	Regulus	W.	64	36	16	3068	66	5	5	3065	67	33	58	3061	69	2	56	3056								
	Mars	W.	32	42	29	3077	34	11	7	3070	35	39	53	3064	37	8	46	3057								
	Jupiter	W.	14	10	40	3186	15	37	6	3161	17	4	2	3141	18	31	22	3124								
	Spica ☿	W.	10	34	43	3066	12	3	34	3062	13	32	30	3058	15	1	31	3053								
	Antares	E.	35	19	36	3065	33	50	44	3061	32	21	47	3058	30	52	46	3053								
	Saturn	E.	37	0	31	3178	35	33	56	3181	34	7	24	3184	32	40	56	3188								
	α Aquilæ	E.	89	13	19	3858	87	59	16	3857	86	45	12	3855	85	31	6	3854								
	Sun	E.	103	54	25	3460	102	33	16	3457	101	12	4	3452	99	50	46	3447								
6	Regulus	W.	76	29	20	3027	77	58	59	3019	79	28	48	3012	80	58	46	3004								
	Mars	W.	44	35	29	3018	46	5	19	3010	47	35	19	3001	49	5	31	2991								
	Jupiter	W.	25	52	31	3060	27	21	30	3049	28	50	42	3037	30	20	9	3026								
	Spica ☿	W.	22	28	10	3025	23	57	52	3017	25	27	44	3010	26	57	45	3002								
	Antares	E.	23	26	8	3026	21	56	27	3018	20	26	36	3010	18	56	35	3002								
	Saturn	E.	25	30	18	3229	24	4	43	3243	22	39	25	3263	21	14	30	3288								
	α Aquilæ	E.	79	20	30	3855	78	6	25	3857	76	52	22	3860	75	38	22	3863								
	Sun	E.	93	2	42	3415	91	40	43	3407	90	18	34	3399	88	56	16	3389								
7	Regulus	W.	88	31	20	2956	90	2	28	2945	91	33	50	2934	93	5	26	2922								
	Mars	W.	56	39	41	2938	58	11	12	2926	59	42	58	2913	61	15	0	2901								
	Jupiter	W.	37	50	50	2969	39	21	42	2956	40	52	50	2943	42	24	14	2931								
	Spica ☿	W.	34	30	35	2954	36	1	46	2943	37	33	10	2931	39	4	50	2920								
	α Aquilæ	E.	69	29	30	3895	68	16	5	3904	67	2	49	3914	65	49	43	3926								
	Sun	E.	82	1	55	3337	80	38	30	3325	79	14	47	3313	77	50	51	3300								
8	Mars	W.	68	59	20	2832	70	33	6	2818	72	7	11	2803	73	41	35	2787								
	Jupiter	W.	50	5	25	2861	51	38	34	2847	53	12	1	2832	54	45	47	2816								

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	Pollux W.	59 48 4	2988	61 18 32	2995	62 48 51	3002	64 19 1	3009
	Regulus W.	23 2 1	3000	24 32 14	3006	26 2 20	3012	27 32 18	3017
	Jupiter E.	28 5 37	3023	26 35 53	3035	25 6 23	3047	23 37 8	3060
	Spica ♀ E.	31 3 33	2985	29 33 1	2992	28 2 38	2999	26 32 24	3006
	Antares E.	76 57 33	2985	75 27 1	2992	73 56 38	2999	72 26 24	3006
	Saturn E.	77 56 41	3042	76 27 20	3050	74 58 9	3058	73 29 8	3065
2	Pollux W.	71 47 47	3039	73 17 11	3045	74 46 28	3050	76 15 39	3055
	Regulus W.	35 0 24	3045	36 29 41	3049	37 58 53	3053	39 28 0	3058
	Spica ♀ E.	19 3 21	3037	17 33 54	3043	16 4 35	3048	14 35 21	3052
	Antares E.	64 57 19	3038	63 27 53	3043	61 58 33	3048	60 29 19	3052
	Saturn E.	66 6 17	3100	64 38 7	3105	63 10 4	3112	61 42 9	3117
	Sun E.	130 56 16	3438	129 34 42	3443	128 13 14	3447	126 51 51	3451
3	Pollux W.	83 40 21	3071	85 9 6	3073	86 37 49	3074	88 6 30	3076
	Regulus W.	46 52 25	3073	48 21 8	3074	49 49 49	3077	51 18 27	3078
	Antares E.	53 4 21	3068	51 35 32	3070	50 6 46	3073	48 38 3	3074
	Saturn E.	54 24 7	3141	52 56 47	3145	51 29 32	3148	50 2 21	3152
	Sun E.	120 5 59	3468	118 44 59	3470	117 24 1	3471	116 3 4	3472
4	Pollux W.	95 29 41	3076	96 58 20	3074	98 27 1	3072	99 55 45	3070
	Regulus W.	58 41 29	3077	60 10 7	3075	61 38 47	3073	63 7 30	3070
	Mars W.	26 49 16	3103	28 17 22	3096	29 45 37	3090	31 13 59	3083
	Antares E.	41 14 38	3073	39 45 56	3072	38 17 12	3069	36 48 25	3068
	Saturn E.	42 47 26	3168	41 20 37	3170	39 53 52	3173	38 27 10	3175
	Sun E.	109 18 29	3470	107 57 31	3469	106 36 32	3466	105 15 30	3463
5	Regulus W.	70 32 0	3051	72 1 10	3046	73 30 26	3040	74 59 49	3034
	Mars W.	38 37 48	3050	40 6 59	3043	41 36 19	3035	43 5 49	3026
	Jupiter W.	19 59 2	3109	21 27 1	3096	22 55 16	3083	24 23 46	3071
	Spica ♀ W.	16 30 38	3049	17 59 50	3043	19 29 10	3038	20 58 36	3031
	Antares E.	29 23 39	3048	27 54 26	3043	26 25 7	3038	24 55 41	3032
	Saturn E.	31 14 33	3193	29 48 16	3200	28 22 7	3208	26 56 7	3217
	α Aquilæ E.	84 16 59	3853	83 2 51	3854	81 48 44	3853	80 34 36	3854
	Sun E.	98 29 23	3441	97 7 53	3436	95 46 17	3430	94 24 34	3422
6	Regulus W.	82 28 54	2995	83 59 13	2986	85 29 43	2977	87 0 25	2966
	Mars W.	50 35 55	2981	52 6 32	2970	53 37 22	2960	55 8 25	2950
	Jupiter W.	31 49 49	3016	33 19 42	3004	34 49 50	2992	36 20 13	2981
	Spica ♀ W.	28 27 56	2993	29 58 18	2984	31 28 51	2974	32 59 37	2964
	Antares E.	17 26 25	2993	15 56 4	2985	14 25 32	2976	12 54 49	2968
	Saturn E.	19 50 4	3319	18 26 15	3361	17 3 14	3414	15 41 13	3488
	α Aquilæ E.	74 24 25	3867	73 10 32	3873	71 56 45	3879	70 43 4	3886
	Sun E.	87 33 47	3380	86 11 8	3370	84 48 17	3359	83 25 14	3349
7	Regulus W.	94 37 17	2910	96 9 23	2898	97 41 45	2884	99 14 24	2871
	Mars W.	62 47 18	2888	64 19 52	2874	65 52 44	2861	67 25 53	2847
	Jupiter W.	43 55 54	2918	45 27 50	2904	47 0 4	2890	48 32 36	2876
	Spica ♀ W.	40 36 44	2908	42 8 53	2894	43 41 19	2882	45 14 1	2869
	α Aquilæ E.	64 36 50	3940	63 24 11	3956	62 11 48	3974	60 59 43	3995
	Sun E.	76 26 39	3287	75 2 12	3273	73 37 29	3259	72 12 29	3245
8	Mars W.	75 16 20	2772	76 51 25	2756	78 26 51	2739	80 2 39	2723
	Jupiter W.	56 19 54	2801	57 54 20	2785	59 29 8	2769	61 4 16	2753

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° / '		° / '		° / '		° / '	
8	Spica ♀ W.	46 47 0	2855	48 20 17	2841	49 53 51	2826	51 27 45	2811
	Sun E.	70 47 13	3229	69 21 38	3215	67 55 46	3199	66 29 35	3183
9	Mars W.	81 38 48	2707	83 15 19	2690	84 52 13	2673	86 29 29	2656
	Jupiter W.	62 39 46	2736	64 15 38	2720	65 51 52	2703	67 28 28	2686
	Spica ♀ W.	59 22 9	2734	60 58 4	2717	62 34 21	2701	64 11 0	2684
	Saturn W.	13 49 17	3303	15 13 25	3186	16 39 51	3092	18 8 10	3017
	Antares W.	13 28 26	2735	15 4 19	2719	16 40 34	2702	18 17 11	2685
	Sun E.	59 13 46	3098	57 45 34	3081	56 17 1	3063	54 48 6	3045
10	Mars W.	94 41 40	2568	96 21 19	2551	98 1 22	2533	99 41 49	2516
	Jupiter W.	75 37 16	2599	77 16 13	2582	78 55 33	2564	80 35 18	2546
	Spica ♀ W.	72 19 54	2599	73 58 51	2581	75 38 12	2564	77 17 57	2546
	Antares W.	26 26 1	2599	28 4 58	2582	29 44 18	2564	31 24 3	2547
	Saturn W.	25 48 57	2776	27 23 57	2742	28 59 41	2711	30 36 7	2681
	Sun E.	47 17 56	2954	45 46 45	2935	44 15 11	2917	42 43 14	2899
11	Mars W.	108 10 13	2429	109 53 7	2412	111 36 25	2395	113 20 7	2378
	Jupiter W.	89 0 7	2459	90 42 18	2443	92 24 52	2425	94 7 51	2409
	Spica ♀ W.	85 42 42	2460	87 24 51	2443	89 7 25	2426	90 50 22	2410
	Antares W.	39 48 46	2460	41 30 55	2443	43 13 28	2426	44 56 25	2410
	Saturn W.	38 47 29	2556	40 27 25	2533	42 7 52	2512	43 48 49	2491
	Sun E.	34 57 40	2809	33 23 24	2793	31 48 47	2776	30 13 47	2759
15	a Arietis E.	51 41 9	2155	49 51 33	2155	48 1 58	2157	46 12 25	2159
	Aldebaran E.	82 50 26	2181	81 1 29	2180	79 12 31	2179	77 23 32	2179
16	Sun W.	32 11 9	2428	33 54 4	2429	35 36 57	2431	37 19 47	2434
	a Arietis E.	37 6 9	2189	35 17 25	2199	33 28 56	2212	31 40 46	2227
	Aldebaran E.	68 19 5	2192	66 30 26	2197	64 41 54	2203	62 53 31	2209
	Pollux E.	111 25 41	2109	109 34 56	2112	107 44 15	2115	105 53 38	2118
17	Sun W.	45 52 39	2458	47 34 52	2465	49 16 55	2471	50 58 49	2478
	Aldebaran E.	53 54 30	2256	52 7 26	2269	50 20 41	2282	48 34 15	2297
	Pollux E.	96 42 12	2143	94 52 19	2150	93 2 36	2157	91 13 3	2164
18	Sun W.	59 25 35	2521	61 6 19	2530	62 46 50	2540	64 27 7	2550
	Aldebaran E.	39 48 8	2392	38 4 22	2417	36 21 12	2446	34 38 42	2476
	Pollux E.	82 8 12	2205	80 19 52	2214	78 31 46	2223	76 43 53	2233
19	Sun W.	72 44 58	2604	74 23 47	2615	76 2 21	2627	77 40 39	2639
	Aldebaran E.	26 19 3	2708	24 42 34	2781	23 7 41	2869	21 34 42	2974
	Pollux E.	67 48 12	2285	66 1 50	2295	64 15 43	2306	62 29 53	2317
	Regulus E.	104 36 49	2285	102 50 27	2295	101 4 20	2306	99 18 29	2317
20	Sun W.	85 48 11	2698	87 24 53	2710	89 1 20	2723	90 37 30	2734
	a Arietis W.	22 3 52	2565	23 43 35	2551	25 23 38	2542	27 3 53	2536
	Pollux E.	53 44 45	2373	52 0 32	2385	50 16 36	2396	48 32 56	2407
	Regulus E.	90 33 14	2372	88 48 59	2383	87 5 0	2395	85 21 18	2406
	Mars E.	120 12 0	2307	118 26 10	2316	116 40 34	2327	114 55 14	2337
21	Sun W.	98 34 25	2794	100 9 1	2806	101 43 21	2818	103 17 26	2829
	a Arietis W.	35 25 55	2541	37 6 11	2546	38 46 21	2552	40 26 22	2558
	Pollux E.	39 58 41	2465	38 16 39	2477	36 34 53	2488	34 53 23	2500
	Regulus E.	76 46 45	2462	75 4 38	2473	73 22 47	2484	71 41 11	2495

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° / "		° / "		° / "		° / "	
8	Spica $\Upsilon$ W.	53 1 58	2797	54 36 30	2781	56 11 23	2766	57 46 36	2750
	Sun E.	65 3 53	3166	63 36 15	3150	62 9 6	3133	60 41 36	3116
9	Mars W.	88 7 8	2639	89 45 10	2621	91 23 36	2604	93 2 26	2586
	Jupiter W.	69 5 27	2669	70 42 49	2652	72 20 34	2624	73 58 43	2616
	Spica $\Upsilon$ W.	65 48 1	2668	67 25 24	2650	69 3 11	2633	70 41 21	2616
	Saturn W.	19 38 2	2954	21 9 12	2901	22 41 29	2855	24 14 46	2815
	Antares W.	19 54 11	2668	21 31 34	2651	23 9 20	2634	24 47 29	2617
	Sun E.	53 18 49	3027	51 49 10	3009	50 19 8	2991	48 48 44	2972
10	Mars W.	101 22 40	2497	103 3 57	2480	104 45 38	2463	106 27 43	2446
	Jupiter W.	82 15 28	2529	83 56 1	2511	85 36 59	2494	87 18 21	2477
	Spica $\Upsilon$ W.	78 58 6	2529	80 38 39	2512	82 19 36	2495	84 0 57	2477
	Antares W.	33 4 11	2530	34 44 43	2512	36 25 40	2495	38 7 1	2477
	Saturn W.	32 13 12	2653	33 50 55	2627	35 29 13	2602	37 8 5	2579
	Sun E.	41 10 54	2880	39 38 10	2863	38 5 3	2845	36 31 33	2827
11	Mars W.	115 4 13	2363	116 48 41	2346	118 33 33	2330	120 18 49	2313
	Jupiter W.	95 51 13	2392	97 34 59	2377	99 19 7	2360	101 3 39	2345
	Spica $\Upsilon$ W.	92 33 42	2394	94 17 26	2378	96 1 33	2362	97 46 3	2346
	Antares W.	46 39 46	2394	48 23 29	2378	50 7 35	2362	51 52 5	2346
	Saturn W.	45 30 15	2471	47 12 9	2452	48 54 30	2433	50 37 18	2415
	Sun E.	28 38 26	2744	27 2 45	2729	25 26 43	2715	23 50 23	2701
15	$\alpha$ Arietis E.	44 22 55	2163	42 33 31	2167	40 44 14	2173	38 55 6	2180
	Aldebaran E.	75 34 33	2180	73 45 36	2182	71 56 41	2185	70 7 51	2188
16	Sun W.	39 2 33	2438	40 45 14	2442	42 27 49	2446	44 10 18	2452
	$\alpha$ Arietis E.	29 52 58	2244	28 5 36	2264	26 18 43	2289	24 32 27	2318
	Aldebaran E.	61 5 17	2217	59 17 15	2226	57 29 26	2235	55 41 51	2245
	Pollux E.	104 3 7	2122	102 12 42	2127	100 22 24	2132	98 32 14	2137
17	Sun W.	52 40 33	2486	54 22 6	2494	56 3 28	2503	57 44 37	2511
	Aldebaran E.	46 48 11	2313	45 2 30	2331	43 17 15	2349	41 32 27	2369
	Pollux E.	89 23 41	2171	87 34 30	2180	85 45 32	2187	83 56 45	2196
18	Sun W.	66 7 11	2561	67 47 0	2572	69 26 34	2582	71 5 54	2593
	Aldebaran E.	32 56 55	2512	31 15 58	2550	29 35 54	2596	27 56 53	2648
	Pollux E.	74 56 15	2243	73 8 51	2253	71 21 43	2264	69 34 50	2274
19	Sun W.	79 18 41	2651	80 56 27	2662	82 33 58	2675	84 11 12	2686
	Aldebaran E.	20 3 57	3107	18 35 56	3276	17 11 16	3494	15 50 45	3785
	Pollux E.	60 44 19	2328	58 59 1	2339	57 13 59	2351	55 29 14	2362
	Regulus E.	97 32 54	2328	95 47 35	2338	94 2 31	2350	92 17 44	2362
20	Sun W.	92 13 25	2747	93 49 3	2758	95 24 26	2770	96 59 33	2782
	$\alpha$ Arietis W.	28 44 16	2534	30 24 42	2533	32 5 9	2535	33 45 34	2538
	Pollux E.	46 49 32	2419	45 6 25	2431	43 23 34	2442	41 40 59	2454
	Regulus E.	83 37 52	2417	81 54 41	2429	80 11 47	2439	78 29 8	2450
	Mars E.	113 10 9	2347	111 25 18	2357	109 40 42	2367	107 56 20	2377
21	Sun W.	104 51 16	2840	106 24 52	2852	107 58 12	2864	109 31 17	2875
	$\alpha$ Arietis W.	42 6 15	2564	43 46 0	2572	45 25 34	2579	47 4 58	2586
	Pollux E.	33 12 10	2511	31 31 12	2523	29 50 31	2534	28 10 5	2547
	Regulus E.	69 59 50	2505	68 18 44	2516	66 37 53	2527	64 57 18	2538

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## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.			P.L. of Diff.	IIIh.			P.L. of Diff.	VIh.			P.L. of Diff.	IXh.			P.L. of Diff.
			°	'	"		°	'	"		°	'	"		°	'	"	
21	Mars	E.	106	12	13	2388	104	28	21	2398	102	44	43	2408	101	1	19	2418
22	Sun	W.	111	4	8	2886	112	36	45	2898	114	9	7	2909	115	41	15	2920
	α Arietis	W.	48	44	12	2594	50	23	15	2602	52	2	8	2611	53	40	48	2618
	Aldebaran	W.	19	57	17	3215	21	23	8	3133	22	50	37	3069	24	19	24	3018
	Pollux	E.	26	29	57	2558	24	50	4	2570	23	10	28	2583	21	31	10	2596
	Regulus	E.	63	16	57	2548	61	36	50	2558	59	56	58	2569	58	17	21	2579
	Mars	E.	92	27	57	2467	90	45	58	2477	89	4	13	2487	87	22	41	2497
	Jupiter	E.	113	26	31	2535	111	46	6	2545	110	5	55	2555	108	25	58	2564
23	Sun	W.	123	18	29	2973	124	49	16	2983	126	19	50	2993	127	50	11	3003
	α Arietis	W.	61	51	23	2661	63	28	55	2669	65	6	16	2677	66	43	26	2686
	Aldebaran	W.	31	55	22	2887	33	27	58	2874	35	0	50	2865	36	33	54	2858
	Regulus	E.	50	2	41	2629	48	24	26	2639	46	46	24	2649	45	8	35	2658
	Mars	E.	78	58	19	2543	77	18	6	2552	75	38	5	2561	73	58	16	2569
	Jupiter	E.	100	9	31	2613	98	30	53	2621	96	52	27	2631	95	14	14	2640
24	α Arietis	W.	74	46	24	2728	76	22	26	2737	77	58	17	2745	79	33	57	2753
	Aldebaran	W.	44	20	45	2847	45	54	12	2847	47	27	39	2849	49	1	3	2851
	Regulus	E.	37	2	43	2706	35	26	11	2715	33	49	51	2724	32	13	43	2734
	Mars	E.	65	42	11	2613	64	3	33	2621	62	25	7	2629	60	46	52	2638
	Jupiter	E.	87	6	10	2684	85	29	9	2693	83	52	19	2702	82	15	41	2710
	Spica ♏	E.	91	0	43	2699	89	24	2	2707	87	47	31	2716	86	11	12	2725
25	α Arietis	W.	87	29	34	2795	89	4	9	2802	90	38	34	2811	92	12	48	2818
	Aldebaran	W.	56	47	9	2869	58	20	7	2874	59	52	59	2880	61	25	44	2884
	Pollux	W.	12	47	4	2812	14	21	16	2811	15	55	29	2813	17	29	40	2816
	Regulus	E.	24	16	13	2782	22	41	22	2792	21	6	44	2803	19	32	20	2815
	Mars	E.	52	38	31	2680	51	1	24	2688	49	24	28	2696	47	47	43	2705
	Jupiter	E.	74	15	18	2751	72	39	46	2760	71	4	25	2768	69	29	15	2776
	Spica ♏	E.	78	12	27	2766	76	37	15	2774	75	2	13	2782	73	27	22	2790
	Saturn	E.	126	1	2	2827	124	27	9	2834	122	53	25	2839	121	19	48	2846
26	Aldebaran	W.	69	7	50	2912	70	39	53	2919	72	11	48	2925	73	43	35	2931
	Pollux	W.	25	19	14	2841	26	52	48	2848	28	26	13	2855	29	59	29	2862
	Mars	E.	39	46	49	2748	38	11	13	2757	36	35	48	2766	35	0	36	2776
	Jupiter	E.	61	36	0	2815	60	1	51	2823	58	27	53	2831	56	54	6	2838
	Spica ♏	E.	65	35	42	2829	64	1	52	2837	62	28	12	2845	60	54	42	2852
	Saturn	E.	113	33	52	2880	112	1	7	2886	110	28	30	2894	108	56	3	2900
27	Aldebaran	W.	81	20	31	2963	82	51	30	2970	84	22	20	2977	85	53	1	2984
	Pollux	W.	37	43	44	2895	39	16	9	2902	40	48	25	2909	42	20	32	2916
	Jupiter	E.	49	7	37	2877	47	34	49	2886	46	2	12	2893	44	29	44	2901
	Spica ♏	E.	53	9	36	2889	51	37	3	2896	50	4	39	2904	48	32	25	2910
	Antares	E.	99	3	38	2889	97	31	5	2896	95	58	41	2903	94	26	26	2911
	Saturn	E.	101	15	54	2935	99	44	19	2941	98	12	52	2947	96	41	33	2954
28	Aldebaran	W.	93	24	21	3018	94	54	12	3026	96	23	53	3032	97	53	26	3039
	Pollux	W.	49	59	4	2949	51	30	21	2954	53	1	31	2961	54	32	32	2968
	Regulus	W.	13	15	51	2988	14	46	19	2987	16	16	48	2987	17	47	17	2989
	Jupiter	E.	36	49	57	2941	35	18	30	2950	33	47	14	2958	32	16	9	2966
	Spica ♏	E.	40	53	24	2945	39	22	2	2951	37	50	48	2957	36	19	42	2964
	Antares	E.	86	47	26	2944	85	16	3	2951	83	44	49	2958	82	13	44	2964
	Saturn	E.	89	7	10	2988	87	36	42	2995	86	6	23	3002	84	36	12	3008

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Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
21	Mars E.	99 18 10	2429	97 35 16	2438	95 52 35	2448	94 10 9	2458
22	Sun W.	117 13 9	2931	118 44 49	2941	120 16 16	2952	121 47 29	2962
	$\alpha$ Arietis W.	55 19 18	2627	56 57 36	2635	58 35 43	2643	60 13 39	2652
	Aldebaran W.	25 49 14	2978	27 19 51	2916	28 51 14	2922	30 23 5	2902
	Pollux E.	19 52 9	2610	18 13 27	2624	16 35 4	2640	14 57 3	2658
	Regulus E.	56 37 57	2589	54 58 47	2600	53 19 52	2610	51 41 10	2619
	Mars E.	85 41 23	2506	84 0 18	2515	82 19 26	2524	80 38 46	2533
	Jupiter E.	106 46 14	2574	105 6 43	2584	103 27 26	2593	101 48 22	2603
23	Sun W.	129 20 20	3013	130 50 16	3023	132 20 0	3034	133 49 31	3043
	$\alpha$ Arietis W.	68 20 24	2695	69 57 11	2704	71 33 46	2711	73 10 11	2720
	Aldebaran W.	38 7 7	2853	39 40 26	2849	41 13 50	2847	42 47 17	2846
	Regulus E.	43 30 59	2668	41 53 36	2678	40 16 26	2687	38 39 28	2696
	Mars E.	72 18 39	2578	70 39 14	2587	69 0 1	2596	67 21 0	2604
	Jupiter E.	93 36 13	2649	91 58 24	2658	90 20 48	2666	88 43 23	2675
24	$\alpha$ Arietis W.	81 9 26	2762	82 44 44	2770	84 19 51	2778	85 54 48	2786
	Aldebaran W.	50 34 25	2854	52 7 43	2858	53 40 56	2861	55 14 5	2865
	Regulus E.	30 37 48	2743	29 2 5	2753	27 26 35	2763	25 51 18	2772
	Mars E.	59 8 49	2647	57 30 58	2655	55 53 18	2663	54 15 49	2672
	Jupiter E.	80 39 14	2719	79 2 59	2726	77 26 54	2735	75 51 1	2743
	Spica $\Upsilon$ E.	84 35 5	2733	82 59 9	2741	81 23 24	2750	79 47 50	2758
25	$\alpha$ Arietis W.	93 46 52	2827	95 20 45	2835	96 54 28	2842	98 28 1	2851
	Aldebaran W.	62 58 23	2889	64 30 56	2895	66 3 21	2901	67 35 39	2906
	Pollux W.	19 3 47	2820	20 37 49	2825	22 11 45	2831	23 45 33	2836
	Regulus E.	17 58 12	2828	16 24 20	2842	14 50 46	2857	13 17 32	2876
	Mars E.	46 11 10	2714	44 34 48	2722	42 58 37	2730	41 22 37	2739
	Jupiter E.	67 54 15	2784	66 19 26	2792	64 44 47	2799	63 10 18	2808
	Spica $\Upsilon$ E.	71 52 41	2798	70 18 11	2806	68 43 51	2814	67 9 41	2822
	Saturn E.	119 46 20	2852	118 13 0	2859	116 39 49	2866	115 6 46	2873
26	Aldebaran W.	75 15 15	2938	76 46 46	2943	78 18 10	2950	79 49 25	2957
	Pollux W.	31 32 37	2868	33 5 37	2875	34 38 28	2882	36 11 10	2888
	Mars E.	33 25 36	2785	31 50 48	2795	30 16 14	2806	28 41 54	2818
	Jupiter E.	55 20 28	2846	53 47 0	2855	52 13 43	2862	50 40 35	2870
	Spica $\Upsilon$ E.	59 21 22	2859	57 48 11	2867	56 15 10	2874	54 42 18	2882
	Saturn E.	107 23 44	2906	105 51 33	2913	104 19 31	2920	102 47 38	2928
27	Aldebaran W.	87 23 34	2990	88 53 59	2997	90 24 15	3005	91 54 22	3011
	Pollux W.	43 52 31	2922	45 24 22	2928	46 56 5	2936	48 27 38	2942
	Jupiter E.	42 57 27	2909	41 25 19	2916	39 53 21	2925	38 21 34	2933
	Spica $\Upsilon$ E.	47 0 19	2917	45 28 22	2924	43 56 34	2931	42 24 55	2938
	Antares E.	92 54 21	2918	91 22 25	2924	89 50 36	2931	88 18 56	2938
	Saturn E.	95 10 23	2961	93 39 22	2969	92 8 30	2975	90 37 46	2981
28	Aldebaran W.	99 22 51	3047	100 52 6	3053	102 21 13	3060	103 50 12	3067
	Pollux W.	56 3 25	2974	57 34 11	2980	59 4 49	2986	60 35 19	2991
	Regulus W.	19 17 44	2992	20 48 7	2996	22 18 25	2999	23 48 39	3003
	Jupiter E.	30 45 14	2976	29 14 31	2985	27 44 0	2995	26 13 41	3005
	Spica $\Upsilon$ E.	34 48 44	2971	33 17 55	2977	31 47 13	2982	30 16 38	2989
	Antares E.	80 42 46	2970	79 11 56	2977	77 41 14	2983	76 10 40	2989
	Saturn E.	83 6 9	3014	81 36 14	3021	80 6 27	3027	78 36 48	3034

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TIME.THE  
MOON'S

Day of the Week.	Day of the Month.	THE SUN'S						Equation of Time, to be added to Apparent Time.	Diff. for 1 h.	THE MOON'S		
		Apparent Rt. Ascen.	Diff. for 1 h	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.	Age.			Meri- dian Pas- sage.		
		h m s	s	° ' "	" ' "		m s	s	d	h m		
Fri.	1	22 47 8.85	9.4	S. 7 43 32.5	57.0	16 9.2	12 41.32	0.504	15.4	13 21		
Sat.	2	22 50 53.27	9.3	7 20 45.0	57.2	16 8.9	12 29.23	0.525	16.4	14 0		
Sun	3	22 54 37.20	9.3	6 57 51.3	57.5	16 8.6	12 16.64	0.545	17.4	14 40		
Mo.	4	22 58 20.65	9.3	6 34 51.5	57.7	16 8.4	12 3.57	0.563	18.4	15 21		
Tu	5	23 2 3.66	9.3	6 11 46.3	58.0	16 8.1	11 50.06	0.580	19.4	16 5		
We	6	23 5 46.24	9.3	5 48 35.8	58.1	16 7.9	11 36.13	0.597	20.4	16 53		
Th.	7	23 9 28.42	9.2	5 25 20.4	58.3	16 7.6	11 21.79	0.613	21.4	17 44		
Fri.	8	23 13 10.22	9.2	5 2 0.6	58.5	16 7.4	11 7.07	0.629	22.4	18 38		
Sat.	9	23 16 51.65	9.2	4 38 36.7	58.7	16 7.2	10 51.98	0.643	23.4	19 34		
Sun	10	23 20 32.72	9.2	4 15 9.1	58.8	16 6.9	10 36.54	0.657	24.4	20 31		
Mo.	11	23 24 13.47	9.2	3 51 38.3	58.9	16 6.6	10 20.77	0.670	25.4	21 27		
Tu.	12	23 27 53.90	9.2	3 28 4.6	59.0	16 6.4	10 4.69	0.682	26.4	22 22		
We	13	23 31 34.03	9.2	3 4 28.4	59.1	16 6.1	9 48.32	0.694	27.4	23 14		
Th.	14	23 35 13.88	9.2	2 40 50.1	59.2	16 5.8	9 31.67	0.705	28.4	♂		
Fri.	15	23 38 53.47	9.1	2 17 10.2	59.2	16 5.6	9 14.75	0.715	29.4	0 5		
Sat.	16	23 42 32.82	9.1	1 53 29.0	59.3	16 5.3	8 57.59	0.724	0.9	0 56		
Sun	17	23 46 11.94	9.1	1 29 46.8	59.3	16 5.0	8 40.21	0.733	1.9	1 48		
Mo.	18	23 49 50.85	9.1	1 6 4.1	59.3	16 4.8	8 22.62	0.741	2.9	2 42		
Tu.	19	23 53 29.57	9.1	0 42 21.3	59.3	16 4.5	8 4.83	0.748	3.9	3 39		
We.	20	23 57 8.12	9.1	S. 0 18 38.8	59.3	16 4.2	7 46.88	0.755	4.9	4 39		
Th.	21	0 0 46.52	9.1	N. 0 5 3.2	59.2	16 4.0	7 28.77	0.760	5.9	5 40		
Fri.	22	0 4 24.78	9.1	0 28 44.1	59.2	16 3.7	7 10.52	0.765	6.9	6 39		
Sat.	23	0 8 2.92	9.1	0 52 23.6	59.1	16 3.4	6 52.16	0.769	7.9	7 36		
Sun.	24	0 11 40.97	9.1	1 16 1.3	59.0	16 3.2	6 33.70	0.772	8.9	8 28		
Mo.	25	0 15 18.95	9.1	1 39 37.0	58.9	16 2.9	6 15.17	0.775	9.9	9 15		
Tu.	26	0 18 56.86	9.1	2 3 10.2	58.8	16 2.6	5 56.58	0.775	10.9	9 59		
We.	27	0 22 34.74	9.1	2 26 40.6	58.6	16 2.3	5 37.97	0.776	11.9	10 41		
Th.	28	0 26 12.62	9.1	2 50 7.9	58.5	16 2.0	5 19.34	0.775	12.9	11 20		
Fri.	29	0 29 50.51	9.1	3 13 31.8	58.3	16 1.8	5 0.73	0.773	13.9	11 59		
Sat.	30	0 33 28.44	9.1	3 36 52.0	58.2	16 1.5	4 42.17	0.771	14.9	12 39		
Sun	31	0 37 6.43	9.1	4 0 8.2	58.0	16 1.2	4 23.66	0.768	15.9	13 19		
Mo.	32	0 40 44.51		N. 4 23 19.9		16 0.9	4 5.23		16.9	14 2		

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.	THE MOON'S							
		Semidiameter.		Hor. Parallax.		Right Ascension.		Declination,	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Fri.	1	14 49.5	14 47.5	54 24.2	54 16.8	11 34 16	11 55 22	2 59 3N.	0 6 1N.
Sat.	2	14 45.8	14 44.6	54 10.8	54 6.3	12 16 22	12 37 22	2 46 15S.	5 36 25S.
Sun.	3	14 43.8	14 43.4	54 3.2	54 1.8	12 58 31	13 19 54	8 23 12	11 5 19
Mo.	4	14 43.5	14 44.2	54 2.3	54 4.8	13 41 39	14 3 51	13 41 29	16 10 20
Tu.	5	14 45.5	14 47.4	54 9.5	54 16.4	14 26 38	14 50 5	18 30 28	20 40 25
We.	6	14 49.9	14 53.1	54 25.7	54 37.3	15 14 16	15 39 15	22 38 36	24 23 20
Th.	7	14 56.8	15 1.3	54 51.2	55 7.6	16 5 3	16 31 41	25 52 54	27 5 29
Fri.	8	15 6.5	15 12.3	55 26.5	55 47.7	16 59 6	17 27 14	27 59 20	28 32 47
Sat.	9	15 18.6	15 25.4	56 10.9	56 36.1	17 55 56	18 25 3	28 44 20	28 32 49
Sun.	10	15 32.7	15 40.3	57 2.9	57 30.6	18 54 25	19 23 50	27 57 25	26 57 49
Mo.	11	15 48.1	15 55.9	57 59.4	58 28.0	19 53 8	20 22 11	25 34 10	23 47 12
Tu.	12	16 3.6	16 11.0	58 56.2	59 23.1	20 50 51	21 19 4	21 38 5	19 8 31
We.	13	16 17.8	16 23.9	59 48.1	60 10.6	21 46 51	22 14 11	16 20 33	13 16 40
Th.	14	16 29.2	16 33.3	60 30.0	60 45.3	22 41 10	23 7 52	9 59 37	6 32 24S.
Fri.	15	16 36.4	16 38.3	60 56.6	61 3.3	23 34 25	0 0 55	2 58 16S.	0 39 25N.
Sat.	16	16 38.8	16 38.1	61 5.3	61 2.7	0 27 33	0 54 25	4 17 9N.	7 51 20
Sun.	17	16 36.1	16 33.0	60 55.6	60 44.1	1 21 40	1 49 24	11 18 26	14 34 56
Mo.	18	16 28.9	16 24.0	60 29.1	60 10.9	2 17 43	2 46 41	17 37 26	20 22 44
Tu.	19	16 18.4	16 12.2	59 50.4	59 27.8	3 16 17	3 46 29	22 47 57	24 50 34
We.	20	16 5.7	15 59.1	59 4.0	58 39.5	4 17 9	4 48 9	26 28 33	27 40 29
Th.	21	15 52.4	15 45.8	58 15.1	57 50.7	5 19 15	5 50 12	28 25 37	28 43 54
Fri.	22	15 39.3	15 33.0	57 26.9	57 3.9	6 20 47	6 50 45	28 35 59	28 3 7
Sat.	23	15 27.1	15 21.6	56 42.3	56 22.0	7 19 55	7 48 11	27 7 4	25 49 56
Sun.	24	15 16.4	15 11.5	56 2.8	55 45.0	8 15 27	8 41 43	24 13 58	22 21 32
Mo.	25	15 7.1	15 3.1	55 28.8	55 14.0	9 7 0	9 31 23	20 14 57	17 56 23
Tu.	26	14 59.4	14 56.0	55 0.5	54 48.2	9 54 55	10 17 44	15 27 55	12 51 28
We.	27	14 53.1	14 50.5	54 37.4	54 27.7	10 39 57	11 1 39	10 8 47	7 21 32
Th.	28	14 48.2	14 46.2	54 19.3	54 12.3	11 23 0	11 44 5	4 31 13N.	1 39 19N.
Fri.	29	14 44.6	14 43.4	54 6.4	54 1.9	12 5 2	12 25 58	1 12 49S.	4 2 50S.
Sat.	30	14 42.5	14 42.0	53 58.6	53 56.7	12 47 0	13 8 14	6 52 23	9 37 9
Sun.	31	14 41.9	14 42.1	53 56.2	53 57.0	13 29 48	13 51 46	12 16 46	14 49 50S.
Mo.	32	14 42.8	14 43.8	53 59.5	54 3.3	14 14 16		17 14 55S.	

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L of Diff.	IIIh.	P.L of Diff.	VIh.	P.L of Diff.	IXh.	P.L of Diff.
		0 / //		0 / //		0 / //		0 / //	
1	Pollux W.	62 5 43	2998	63 35 59	3003	65 6 8	3009	66 36 10	3014
	Regulus W.	25 18 48	3007	26 48 52	3012	28 18 50	3017	29 48 42	3021
	Jupiter E.	24 43 35	3017	23 13 43	3029	21 44 6	3043	20 14 46	3059
	Spica ♀ E.	28 46 12	2994	27 15 52	3000	25 45 39	3006	24 15 34	3012
	Antares E.	74 40 13	2994	73 9 53	3000	71 39 40	3006	70 9 34	3011
	Saturn E.	77 7 17	3040	75 37 54	3046	74 8 38	3051	72 39 29	3057
2	Pollux W.	74 4 46	3039	75 34 11	3043	77 3 31	3046	78 32 47	3051
	Regulus W.	37 16 43	3043	38 46 3	3046	40 15 19	3050	41 44 30	3053
	Antares E.	62 40 43	3036	61 11 15	3040	59 41 52	3044	58 12 34	3048
	Saturn E.	65 15 33	3086	63 47 6	3092	62 18 46	3096	60 50 32	3101
3	Pollux W.	85 57 55	3067	87 26 45	3069	88 55 33	3072	90 24 17	3073
	Regulus W.	49 9 22	3069	50 38 10	3070	52 6 56	3073	53 35 39	3075
	Mars W.	23 6 8	3000	24 36 21	2995	26 6 40	2991	27 37 4	2987
	Antares E.	50 47 12	3064	49 18 19	3067	47 49 29	3069	46 20 42	3071
	Saturn E.	53 30 54	3125	52 3 15	3130	50 35 42	3135	49 8 15	3138
4	Regulus W.	60 58 47	3079	62 27 22	3079	63 55 57	3078	65 24 33	3078
	Mars W.	35 10 2	2974	36 40 47	2973	38 11 34	2970	39 42 25	2967
	Antares E.	38 57 14	3076	37 28 35	3076	35 59 56	3076	34 31 17	3076
	Saturn E.	41 52 15	3161	40 25 19	3166	38 58 29	3171	37 31 45	3176
	Sun E.	134 40 43	3461	133 19 35	3460	131 58 26	3460	130 37 17	3459
5	Mars W.	47 17 32	2951	48 48 46	2947	50 20 5	2943	51 51 30	2938
	Jupiter W.	23 39 32	3083	25 8 3	3074	26 36 44	3066	28 5 35	3059
	Spica ♀ W.	18 46 50	3067	20 15 40	3064	21 44 34	3059	23 13 34	3056
	Saturn E.	30 19 48	3210	28 53 52	3220	27 28 7	3233	26 2 37	3247
	α Aquilæ E.	82 27 31	3880	81 13 51	3884	80 0 15	3889	78 46 44	3893
	Sun E.	123 51 9	3448	122 29 47	3445	121 8 21	3442	119 46 52	3437
6	Mars W.	59 30 10	2910	61 2 16	2903	62 34 31	2896	64 6 55	2888
	Jupiter W.	35 32 7	3022	37 1 53	3013	38 31 50	3005	40 1 57	2997
	Spica ♀ W.	30 39 47	3031	32 9 21	3024	33 39 4	3017	35 8 55	3011
	α Aquilæ E.	72 40 33	3928	71 27 42	3938	70 15 1	3949	69 2 31	3960
	Sun E.	112 58 3	3409	111 35 57	3402	110 13 43	3395	108 51 21	3387
7	Mars W.	71 51 31	2845	73 25 1	2835	74 58 44	2825	76 32 40	2814
	Jupiter W.	47 35 18	2949	49 6 35	2938	50 38 6	2927	52 9 50	2916
	Spica ♀ W.	42 40 34	2968	44 11 27	2958	45 42 32	2947	47 13 51	2937
	Sun E.	101 57 4	3340	100 33 39	3330	99 10 2	3319	97 46 12	3307
8	Mars W.	84 26 2	2754	86 1 30	2741	87 37 16	2727	89 13 20	2713
	Jupiter W.	59 52 16	2854	61 25 34	2841	62 59 9	2826	64 33 3	2812
	Spica ♀ W.	54 53 57	2877	56 26 45	2864	57 59 50	2850	59 33 13	2836
	Sun E.	90 43 26	3241	89 18 6	3227	87 52 29	3212	86 26 34	3197
9	Mars W.	97 18 23	2640	98 56 24	2624	100 34 47	2607	102 13 32	2591
	Jupiter W.	72 27 19	2735	74 3 12	2719	75 39 26	2703	77 16 2	2686
	Spica ♀ W.	67 24 50	2761	69 0 9	2744	70 35 51	2728	72 11 53	2711
	Antares W.	21 31 1	2761	23 6 20	2745	24 42 0	2729	26 18 2	2712
	Saturn W.	20 9 45	3036	21 39 13	2983	23 9 47	2938	24 41 1	2899
	Sun E.	79 12 15	3114	77 44 23	3096	76 16 9	3079	74 47 34	3061
10	Jupiter W.	85 24 50	2598	87 3 48	2580	88 43 10	2561	90 22 58	2543

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Midnight.			P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.						
			°	'	''		°	'	''		°	'	''					
1	Pollux	W.	68	6	6	3019	69	35	55	3024	71	5	35	3029	72	35	15	3034
	Regulus	W.	31	18	29	3025	32	48	11	3030	34	17	47	3035	35	47	17	3038
	Jupiter	E.	18	45	46	3077	17	17	8	3098	15	48	56	3124	14	21	15	3158
	Spica ☿	E.	22	45	36	3017	21	15	44	3022	19	45	58	3027	18	16	19	3032
	Antares	E.	68	33	35	3017	67	9	43	3022	65	39	57	3026	64	10	17	3031
Saturn	E.	71	10	27	3063	69	41	32	3070	68	12	46	3075	66	44	6	3081	
2	Pollux	W.	80	1	57	3055	81	31	2	3057	83	0	4	3061	84	29	1	3064
	Regulus	W.	43	13	37	3057	44	42	39	3061	46	11	37	3064	47	40	31	3066
	Antares	E.	56	43	21	3052	55	14	13	3056	53	45	9	3059	52	16	9	3061
	Saturn	E.	59	22	24	3107	57	54	23	3111	56	26	27	3117	54	58	38	3121
3	Pollux	W.	91	53	0	3075	93	21	40	3076	94	50	19	3077	96	18	57	3078
	Regulus	W.	55	4	19	3076	56	32	58	3078	58	1	35	3078	59	30	12	3079
	Mars	W.	29	7	33	2985	30	38	5	2981	32	8	41	2979	33	39	20	2977
	Antares	E.	44	51	57	3073	43	23	14	3074	41	54	33	3075	40	25	53	3076
	Saturn	E.	47	40	52	3143	46	13	35	3148	44	46	23	3153	43	19	17	3156
4	Regulus	W.	66	53	10	3077	68	21	48	3075	69	50	28	3074	71	19	10	3073
	Mars	W.	41	13	19	2965	42	44	16	2962	44	15	17	2958	45	46	22	2954
	Antares	E.	33	2	38	3074	31	33	57	3073	30	5	14	3071	28	36	29	3069
	Saturn	E.	36	5	7	3181	34	38	35	3188	33	12	11	3194	31	45	55	3202
	Sun	E.	129	16	7	3456	127	54	56	3456	126	33	43	3454	125	12	27	3452
5	Mars	W.	53	23	1	2933	54	54	38	2928	56	26	21	2922	57	58	12	2916
	Jupiter	W.	29	34	34	3051	31	3	44	3044	32	33	2	3036	34	2	30	3029
	Spica ☿	W.	24	42	37	3052	26	11	45	3047	27	41	0	3043	29	10	20	3037
	Saturn	E.	24	37	24	3265	23	12	32	3288	21	48	6	3314	20	24	11	3348
	α Aquilæ	E.	77	33	17	3899	76	19	56	3905	75	6	41	3912	73	53	33	3919
	Sun	E.	118	25	17	3433	117	3	38	3427	115	41	52	3422	114	20	1	3416
6	Mars	W.	65	39	29	2880	67	12	13	2872	68	45	8	2863	70	18	14	2855
	Jupiter	W.	41	32	14	2987	43	2	43	2979	44	33	22	2969	46	4	14	2959
	Spica ☿	W.	36	38	54	3003	38	9	3	2994	39	39	22	2986	41	9	53	2978
	α Aquilæ	E.	67	50	12	3974	66	28	7	3988	65	26	15	4005	64	14	40	4022
	Sun	E.	107	28	50	3379	106	6	9	3370	104	43	18	3361	103	20	17	3351
7	Mars	W.	78	6	50	2802	79	41	15	2791	81	15	55	2779	82	50	51	2767
	Jupiter	W.	53	41	48	2905	55	14	1	2892	56	46	30	2880	58	19	15	2867
	Spica ☿	W.	48	45	23	2926	50	17	9	2915	51	49	9	2902	53	21	25	2890
	Sun	E.	96	22	9	3294	94	57	51	3282	93	33	18	3269	92	8	30	3255
8	Mars	W.	90	49	42	2700	92	26	22	2685	94	3	22	2670	95	40	42	2655
	Jupiter	W.	66	7	15	2798	67	41	46	2782	69	16	37	2767	70	51	48	2752
	Spica ☿	W.	61	6	54	2822	62	40	53	2807	64	15	12	2791	65	49	51	2776
	Sun	E.	85	0	21	3181	83	33	49	3165	82	6	58	3148	80	39	47	3131
9	Mars	W.	103	52	39	2575	105	32	8	2558	107	12	1	2541	108	52	17	2524
	Jupiter	W.	78	53	1	2669	80	30	23	2652	82	8	8	2634	83	46	17	2616
	Spica ☿	W.	73	48	19	2695	75	25	6	2677	77	2	17	2659	78	39	52	2641
	Antares	W.	27	54	26	2695	29	31	13	2678	31	8	22	2660	32	45	57	2642
	Saturn	W.	26	13	38	2862	27	46	46	2828	29	20	27	2796	30	55	10	2767
	Sun	E.	73	18	36	3043	71	49	16	3023	70	19	32	3004	68	49	24	2985
10	Jupiter	W.	92	3	11	2525	93	43	49	2506	95	24	54	2487	97	6	25	2469

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.			P. L. of Diff.	IIh.			P. L. of Diff.	VIh.			P. L. of Diff.	IXh.			P. L. of Diff.
			°	'	"		°	'	"		°	'	"		°	'	"	
10	Spica $\mu$	W.	80	17	51	2623	81	56	14	2605	83	35	2	2587	85	14	15	2569
	Antares	W.	31	23	55	2624	36	2	18	2606	37	41	5	2588	39	20	17	2569
	Saturn	W.	32	30	21	2738	34	6	10	2711	35	42	36	2685	37	19	36	2660
	Sun	E.	67	18	53	2966	65	47	57	2946	64	16	37	2926	62	44	51	2906
11	Jupiter	W.	98	48	22	2450	100	30	46	2431	102	13	36	2412	103	56	53	2394
	Antares	W.	47	42	46	2475	49	24	34	2456	51	6	49	2437	52	49	31	2418
	Saturn	W.	45	32	53	2541	47	13	9	2520	48	53	55	2497	50	35	12	2476
	Sun	E.	54	59	35	2804	53	25	13	2785	51	50	25	2764	50	15	9	2744
12	Jupiter	W.	112	39	55	2302	114	25	51	2285	116	12	12	2268	117	58	58	2251
	Antares	W.	61	29	41	2326	63	15	3	2308	65	0	51	2290	66	47	5	2273
	Saturn	W.	59	9	4	2373	60	53	17	2353	62	37	59	2335	64	23	8	2316
	Sun	E.	42	12	11	2644	40	34	16	2625	38	55	55	2605	37	17	7	2587
17	Sun	W.	26	57	58	2321	28	43	27	2328	30	28	46	2336	32	13	53	2344
	Aldebaran	E.	45	6	28	2180	43	17	30	2198	41	28	59	2218	39	40	58	2241
	Pollux	E.	87	37	57	2028	85	45	6	2035	83	52	26	2042	81	59	57	2050
18	Sun	W.	40	56	10	2396	42	39	51	2408	44	23	14	2420	46	6	20	2433
	Venus	W.	19	46	48	2513	21	27	43	2520	23	8	28	2528	24	49	2	2538
	Aldebaran	E.	30	50	48	2408	29	7	24	2457	27	25	10	2515	25	44	17	2584
	Pollux	E.	72	40	53	2098	70	49	51	2109	68	59	6	2122	67	8	40	2133
19	Sun	W.	54	37	3	2504	56	18	11	2520	57	58	57	2535	59	39	22	2551
	Venus	W.	33	8	4	2600	34	46	59	2614	36	25	35	2629	38	3	51	2644
	$\alpha$ Arietis	W.	18	0	45	2482	19	42	21	2450	21	24	48	2429	23	7	41	2415
	Pollux	E.	58	1	15	2200	56	12	47	2214	54	24	41	2229	52	36	57	2244
	Mars	E.	115	2	14	2090	113	10	59	2107	111	20	10	2122	109	29	44	2136
20	Sun	W.	67	55	54	2633	69	34	4	2649	71	11	53	2666	72	49	18	2683
	Venus	W.	46	9	55	2721	47	46	3	2741	49	21	49	2758	50	57	12	2775
	$\alpha$ Arietis	W.	31	44	31	2415	33	27	44	2421	35	10	49	2430	36	53	41	2439
	Pollux	E.	43	43	53	2322	41	58	25	2337	40	13	20	2354	38	28	39	2370
	Regulus	E.	80	32	26	2319	78	46	54	2335	77	1	45	2351	75	16	59	2366
	Mars	E.	100	23	3	2211	98	34	51	2225	96	47	1	2241	94	59	35	2256
	Jupiter	E.	114	15	50	2114	112	32	35	2130	110	49	41	2144	109	7	9	2159
21	Sun	W.	80	50	45	2768	82	25	55	2785	84	0	43	2802	85	35	9	2818
	Venus	W.	58	48	36	2859	60	21	47	2876	61	54	36	2894	63	27	3	2911
	$\alpha$ Arietis	W.	45	24	23	2496	47	5	42	2509	48	46	43	2522	50	27	25	2535
	Regulus	E.	66	38	49	2445	61	56	19	2461	63	14	11	2477	61	32	25	2492
	Mars	E.	86	8	4	2331	84	22	54	2350	82	38	7	2365	80	53	42	2380
	Jupiter	E.	114	15	50	2114	112	32	35	2130	110	49	41	2144	109	7	9	2159
	Sun	W.	93	21	59	2899	94	54	19	2916	96	26	18	2931	97	57	58	2946
22	Venus	W.	71	3	59	2993	72	34	21	3009	74	4	23	3025	75	34	5	3041
	$\alpha$ Arietis	W.	58	46	23	2602	60	25	16	2615	62	3	50	2629	63	42	6	2642
	Aldebaran	W.	29	2	28	2880	30	35	13	2865	32	8	17	2851	33	41	35	2846
	Regulus	E.	53	8	58	2568	51	29	19	2583	49	50	1	2597	48	11	2	2612
	Mars	E.	72	17	1	2455	70	34	44	2470	68	52	48	2484	67	11	12	2498
	Jupiter	E.	100	39	45	2533	98	59	18	2547	97	19	10	2561	95	39	22	2576
	Sun	W.	105	31	33	3020	107	1	21	3034	108	30	52	3048	110	0	6	3061
23	Venus	W.	82	57	51	3115	84	25	42	3130	85	53	15	3143	87	20	32	3157
	Aldebaran	W.	41	29	26	2842	43	3	0	2845	44	36	29	2849	46	9	54	2854

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month	Star's Name and Position.		Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
10	Spica $\pi$	W.	86 53 5	2550	88 33 57	2531	90 14 27	2512	91 55 23	2494
	Antares	W.	40 59 57	2550	42 39 59	2532	44 20 27	2512	46 1 24	2491
	Saturn	W.	38 57 10	2635	40 35 17	2611	42 13 57	2588	43 53 9	2564
	Sun	E.	61 12 40	2886	59 40 3	2866	58 7 6	2845	56 33 31	2824
11	Jupiter	W.	105 40 36	2375	107 24 46	2357	109 9 23	2339	110 54 26	2321
	Antares	W.	54 32 40	2399	56 16 16	2381	58 0 18	2363	59 44 46	2344
	Saturn	W.	52 16 59	2455	53 59 16	2434	55 42 3	2413	57 25 19	2393
	Sun	E.	48 39 27	2723	47 3 18	2704	45 26 43	2683	42 49 40	2663
12	Jupiter	W.	119 46 10	2234	121 33 47	2218	123 21 48	2202	125 10 13	2186
	Antares	W.	68 33 41	2256	70 20 49	2239	72 8 19	2223	73 56 13	2206
	Saturn	W.	66 8 44	2298	67 54 47	2280	69 41 16	2263	71 28 9	2245
	Sun	E.	35 37 54	2568	33 58 15	2551	32 18 12	2533	30 37 44	2515
17	Sun	W.	33 58 48	2353	35 43 30	2362	37 27 59	2373	39 12 12	2384
	Aldebaran	E.	37 53 31	2266	36 6 41	2295	34 20 34	2327	32 35 14	2364
	Pollux	E.	80 7 40	2058	78 15 36	2068	76 23 47	2077	74 32 12	2087
18	Sun	W.	47 49 8	2446	49 31 37	2460	51 13 46	2475	52 55 35	2490
	Venus	W.	26 29 23	2549	28 9 28	2561	29 49 17	2573	31 28 49	2585
	Aldebaran	E.	24 5 0	2666	22 27 35	2767	20 52 24	2892	19 19 55	3047
	Pollux	E.	65 18 31	2146	63 28 42	2159	61 39 12	2172	59 50 3	2186
19	Sun	W.	61 19 55	2567	62 59 6	2583	64 38 24	2599	66 17 20	2615
	Venus	W.	39 41 46	2659	41 19 21	2675	42 56 34	2692	44 33 25	2708
	$\alpha$ Arietis	W.	24 50 54	2408	26 34 17	2406	28 17 43	2406	30 1 9	2409
	Pollux	E.	50 49 35	2259	49 2 35	2275	47 15 58	2290	45 29 44	2306
	Mars	E.	107 39 39	2150	105 49 56	2165	104 0 36	2180	102 11 38	2195
20	Sun	W.	74 26 21	2700	76 3 1	2717	77 39 18	2734	79 15 13	2751
	Venus	W.	52 32 13	2792	54 6 52	2808	55 41 9	2825	57 15 4	2843
	$\alpha$ Arietis	W.	38 36 20	2449	40 18 45	2460	42 0 54	2472	43 42 47	2484
	Pollux	E.	36 44 21	2387	35 0 27	2403	33 16 56	2419	31 33 48	2436
	Regulus	E.	73 32 36	2382	71 48 35	2398	70 4 57	2414	68 21 42	2429
	Mars	E.	93 12 31	2272	91 25 50	2287	89 39 32	2303	87 53 37	2318
21	Sun	W.	87 9 14	2835	88 42 57	2852	90 16 18	2867	91 49 19	2884
	Venus	W.	64 59 8	2928	66 30 52	2944	68 2 15	2961	69 33 17	2977
	$\alpha$ Arietis	W.	52 7 50	2548	53 47 56	2561	55 27 44	2575	57 7 13	2589
	Regulus	E.	59 51 0	2508	58 9 58	2523	56 29 17	2538	54 48 57	2553
	Mars	E.	79 9 38	2395	77 25 56	2410	75 42 36	2426	73 59 38	2441
	Jupiter	E.	107 24 58	2474	105 43 9	2489	104 1 40	2504	102 20 33	2518
22	Sun	W.	99 29 19	2961	101 0 20	2977	102 31 2	2991	104 1 26	3005
	Venus	W.	77 3 27	3056	78 32 31	3071	80 1 16	3087	81 29 42	3101
	$\alpha$ Arietis	W.	65 20 4	2655	66 57 44	2668	68 35 7	2681	70 12 13	2694
	Aldebaran	W.	35 15 3	2842	36 48 36	2839	38 22 13	2839	39 55 50	2840
	Regulus	E.	46 32 24	2627	44 54 5	2641	43 16 5	2655	41 38 24	2669
	Mars	E.	65 29 56	2512	63 49 0	2526	62 8 23	2540	60 28 5	2553
	Jupiter	E.	93 59 54	2589	92 20 44	2603	90 41 53	2616	89 3 20	2630
23	Sun	W.	111 29 3	3074	112 57 45	3087	114 26 10	3100	115 54 20	3112
	Venus	W.	88 47 32	3171	90 14 16	3184	91 40 44	3198	93 6 56	3210
	Aldebaran	W.	47 43 12	2859	49 16 23	2864	50 49 28	2871	52 22 24	2877

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.			Noon.			P.L. of Diff.			IIIh.			P.L. of Diff.			VIh.			P.L. of Diff.			IXh.			P.L. of Diff.		
				°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
23	Regulus	E.		40	1	2	2681			38	23	57	2695			36	47	11	2708			35	10	42	2722		
	Mars	E.		58	48	5	2567			57	8	24	2579			55	29	0	2593			53	49	55	2606		
	Jupiter	E.		87	25	6	2642			85	47	8	2655			84	9	28	2668			82	32	6	2680		
24	Sun	W.		117	22	15	3124			118	49	55	3137			120	17	20	3148			121	44	32	3159		
	Venus	W.		94	32	54	3223			95	58	36	3235			97	24	4	3247			98	49	18	3259		
	Aldebaran	W.		53	55	12	2884			55	27	52	2891			57	0	23	2898			58	32	45	2905		
	Mars	E.		45	38	42	2666			44	1	16	2677			42	24	5	2689			40	47	10	2699		
	Jupiter	E.		74	29	12	2739			72	53	24	2749			71	17	49	2760			69	42	29	2771		
	Spica ♏	E.		81	9	22	2772			79	34	18	2783			77	59	28	2794			76	24	52	2805		
25	Sun	W.		128	57	12	3213			130	23	6	3221			131	48	50	3231			133	14	22	3241		
	Aldebaran	W.		66	12	21	2939			67	43	50	2947			69	15	9	2954			70	46	20	2961		
	Pollux	W.		22	20	30	2868			23	53	30	2876			25	26	20	2883			26	59	1	2890		
	Mars	E.		32	46	11	2753			31	10	41	2764			29	35	26	2775			28	0	25	2785		
	Jupiter	E.		61	49	8	2819			60	15	5	2829			58	41	15	2838			57	7	36	2846		
	Spica ♏	E.		68	35	9	2853			67	1	50	2862			65	28	42	2870			63	55	45	2879		
26	Aldebaran	W.		78	20	4	2995			79	50	23	3001			81	20	35	3007			82	50	39	3013		
	Pollux	W.		34	40	8	2925			36	11	55	2931			37	43	34	2938			39	15	4	2945		
	Jupiter	E.		49	22	5	2887			47	49	30	2895			46	17	5	2902			44	44	49	2910		
	Spica ♏	E.		56	13	39	2918			54	41	43	2925			53	9	56	2932			51	38	18	2939		
	Saturn	E.		104	38	6	2949			103	6	49	2956			101	35	41	2962			100	4	41	2969		
27	Pollux	W.		46	50	39	2974			48	21	24	2979			49	52	3	2985			51	22	35	2989		
	Jupiter	E.		37	5	51	2946			35	34	31	2953			34	3	19	2961			32	32	17	2968		
	Spica ♏	E.		44	2	11	2970			42	31	20	2975			41	0	36	2981			39	30	0	2985		
	Antares	E.		89	56	17	2970			88	25	27	2975			86	54	43	2981			85	24	6	2986		
	Saturn	E.		92	31	36	2998			91	1	20	3004			89	31	12	3009			88	1	10	3014		
28	Pollux	W.		58	53	44	3013			60	23	41	3017			61	53	33	3021			63	23	20	3025		
	Regulus	W.		22	7	23	3026			23	37	3	3029			25	6	40	3032			26	36	13	3034		
	Spica ♏	E.		31	58	29	3010			30	28	29	3014			28	58	33	3018			27	28	43	3022		
	Antares	E.		77	52	37	3010			76	22	36	3014			74	52	40	3018			73	22	49	3022		
	Saturn	E.		80	32	35	3039			79	3	10	3043			77	33	50	3047			76	4	36	3051		
29	Pollux	W.		70	51	5	3042			72	20	26	3045			73	49	43	3048			75	18	57	3051		
	Regulus	W.		34	3	14	3047			35	32	28	3049			37	1	40	3052			38	30	48	3054		
	Mars	W.		17	20	29	2977			18	51	11	2974			20	21	56	2973			21	52	43	2972		
	Antares	E.		65	54	47	3039			64	25	23	3043			62	56	3	3046			61	26	47	3048		
	Saturn	E.		68	39	42	3072			67	10	58	3076			65	42	19	3079			64	13	44	3083		
30	Pollux	W.		82	44	18	3062			84	13	14	3064			85	42	8	3065			87	11	0	3066		
	Regulus	W.		45	55	50	3065			47	24	43	3065			48	53	35	3067			50	22	25	3069		
	Mars	W.		29	26	48	2973			30	57	35	2974			32	28	21	2974			33	59	7	2975		
	Antares	E.		54	1	11	3060			52	32	12	3062			51	3	16	3063			49	34	21	3065		
	Saturn	E.		56	51	56	3101			55	23	48	3104			53	55	43	3108			52	27	43	3111		
31	Regulus	W.		57	46	13	3073			59	14	56	3074			60	43	38	3073			62	12	21	3073		
	Mars	W.		41	32	38	2978			43	3	18	2979			44	33	57	2978			46	4	37	2979		
	Antares	E.		42	10	11	3069			40	41	24	3070			39	12	38	3070			37	43	52	3070		
	Saturn	E.		45	8	47	3129			43	41	13	3134			42	13	45	3138			40	46	21	3143		
	α Aquilæ	E.		94	58	3	3868			93	44	11	3866			92	30	17	3865			91	16	22	3863		

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Midnight.			P.L. of Diff.			XVh.			P.L. of Diff.			XVIIIh.			P.L. of Diff.			XXIh.			P.L. of Diff.		
			°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
23	Regulus	E.	33	34	31	2735			31	58	37	2747			30	23	0	2760			28	47	40	2772		
	Mars	E.	52	11	8	2618			50	32	37	2629			48	54	22	2642			47	16	24	2654		
	Jupiter	E.	80	54	59	2692			79	18	9	2701			77	41	35	2716			76	5	16	2727		
24	Sun	W.	123	11	30	3171			124	38	14	3181			126	4	46	3192			127	31	5	3202		
	Venus	W.	100	11	18	3270			101	39	5	3281			103	3	39	3292			104	28	0	3302		
	Aldebaran	W.	60	4	58	2912			61	37	2	2918			63	8	58	2926			61	40	44	2933		
	Mars	E.	39	10	29	2710			37	34	3	2722			35	57	52	2732			34	21	54	2743		
	Jupiter	E.	68	7	23	2781			66	32	30	2791			64	57	50	2801			63	23	23	2810		
	Spica 𐄂	E.	74	50	30	2815			73	16	21	2825			71	42	25	2834			70	8	41	2843		
25	Sun	W.	134	39	43	3250			136	4	53	3259			137	29	53	3268			138	54	42	3275		
	Aldebaran	W.	72	17	21	2967			73	48	15	2975			75	18	59	2981			76	49	36	2988		
	Pollux	W.	28	31	32	2897			30	3	55	2905			31	36	8	2911			33	8	13	2919		
	Mars	E.	26	25	37	2796			24	51	4	2807			23	16	45	2818			21	42	41	2830		
	Jupiter	E.	55	34	8	2855			54	0	51	2863			52	27	45	2872			50	54	50	2880		
	Spica 𐄂	E.	62	22	59	2887			60	50	24	2895			59	17	59	2903			57	45	44	2911		
26	Aldebaran	W.	84	20	35	3019			85	50	24	3026			87	20	5	3031			88	49	39	3038		
	Pollux	W.	40	46	26	2951			42	17	40	2957			43	48	47	2962			45	19	47	2969		
	Jupiter	E.	43	12	43	2917			41	40	46	2925			40	8	59	2932			38	37	21	2939		
	Spica 𐄂	E.	50	6	49	2946			48	35	28	2951			47	4	14	2958			45	33	9	2964		
	Saturn	E.	98	33	49	2974			97	3	4	2981			95	32	27	2987			94	1	58	2993		
27	Pollux	W.	52	53	1	2995			54	23	20	2999			55	53	34	3004			57	23	42	3009		
	Jupiter	E.	31	1	24	2975			29	30	40	2983			28	0	6	2992			26	29	43	2999		
	Spica 𐄂	E.	37	59	29	2991			36	29	5	2996			34	58	47	3001			33	28	36	3005		
	Antares	E.	83	53	36	2991			82	23	12	2996			80	52	54	3001			79	23	43	3006		
	Saturn	E.	86	31	15	3019			85	1	26	3024			83	31	43	3029			82	2	6	3034		
28	Pollux	W.	64	53	1	3028			66	22	39	3032			67	52	12	3035			69	21	41	3039		
	Regulus	W.	28	5	44	3036			29	35	12	3039			31	4	36	3042			32	33	57	3045		
	Spica 𐄂	E.	25	58	58	3026			24	29	18	3029			22	59	41	3031			21	30	10	3037		
	Antares	E.	71	53	4	3026			70	23	23	3030			68	53	47	3033			67	24	15	3036		
	Saturn	E.	74	35	27	3056			73	6	23	3060			71	37	24	3065			70	8	31	3068		
29	Pollux	W.	76	48	7	3053			78	17	14	3056			79	46	18	3058			81	15	19	3060		
	Regulus	W.	39	59	54	3056			41	28	57	3059			42	57	57	3061			44	26	55	3063		
	Mars	W.	23	23	31	2971			24	54	20	2970			26	25	10	2971			27	55	59	2971		
	Antares	E.	59	57	34	3051			58	28	24	3053			56	59	17	3056			55	30	13	3057		
	Saturn	E.	62	45	14	3087			61	16	48	3090			59	48	26	3094			58	20	9	3097		
30	Pollux	W.	88	39	51	3068			90	8	39	3069			91	37	26	3070			93	6	12	3071		
	Regulus	W.	51	51	13	3070			53	19	59	3070			54	48	45	3072			56	17	29	3072		
	Mars	W.	35	29	51	2976			37	0	34	2977			38	31	16	2978			40	1	57	2978		
	Antares	E.	48	5	28	3066			46	36	37	3067			45	7	47	3069			43	38	59	3069		
	Saturn	E.	50	59	47	3115			49	31	55	3119			48	4	8	3122			46	36	25	3126		
31	Regulus	W.	63	41	3	3073			65	9	46	3073			66	38	29	3072			68	7	13	3071		
	Mars	W.	47	35	16	2979			49	5	55	2979			50	36	31	2979			52	7	13	2978		
	Antares	E.	36	15	6	3070			34	46	20	3070			33	17	21	3069			31	48	47	3069		
	Saturn	E.	39	19	3	3148			37	51	51	3153			36	24	46	3159			34	57	48	3166		
	α Aquilæ	E.	90	2	25	3863			88	48	28	3861			87	34	32	3865			86	20	37	3867		

## AT APPARENT NOON.

MEAN  
TIME.THE  
MOON'S

Day of the Week.	Day of the Month.	THE SUN'S					Equation of Time, to be added to subt. from Apparent Time.	Diff. for 1 h.	THE MOON'S	
		Apparent Rt. Ascen.	Diff. for 1 h.	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.			Age.	Meri- dian Pas- sage.
		h m s	s	° ' "	"	' "	m s	s	d	h m
Mo.	1	0 40 44.51	8.1	N. 4 23 19.9	57.8	16 0.9	4 5.23	0.763	16.9	14 2
Tu.	2	0 44 22.69	8.1	4 46 27.0	57.6	16 0.7	3 46.92	0.758	17.9	14 48
We.	3	0 48 1.01	8.1	5 9 29.1	57.4	16 0.4	3 28.73	0.751	18.9	15 38
Th.	4	0 51 39.49	8.1	5 32 25.9	57.1	16 0.1	3 10.70	0.744	19.9	16 30
Fri.	5	0 55 18.15	8.1	5 55 17.0	56.9	15 59.8	2 52.85	0.736	20.9	17 25
Sat.	6	0 58 56.99	8.1	6 18 2.2	56.6	15 59.5	2 35.18	0.727	21.9	18 20
Sun.	7	1 2 36.05	8.1	6 40 41.0	56.3	15 59.3	2 17.73	0.718	22.9	19 15
Mo.	8	1 6 15.33	8.1	7 3 13.1	56.1	15 59.0	2 0.50	0.708	23.9	20 8
Tu.	9	1 9 54.86	8.2	7 25 38.2	55.7	15 58.7	1 43.52	0.697	24.9	20 59
We.	10	1 13 34.66	8.2	7 47 55.9	55.4	15 58.4	1 26.80	0.685	25.9	21 50
Th.	11	1 17 14.72	8.2	8 10 5.7	55.1	15 58.2	1 10.36	0.673	26.9	22 40
Fri.	12	1 20 55.07	8.2	8 32 7.4	54.7	15 57.9	0 54.21	0.660	27.9	23 32
Sat.	13	1 24 35.72	8.2	8 54 0.6	54.4	15 57.6	0 38.36	0.647	28.9	♂
Sun.	14	1 28 16.70	8.2	9 15 44.9	54.0	15 57.3	0 22.83	0.633	0.5	0 26
Mo.	15	1 31 58.02	8.2	9 37 20.1	53.6	15 57.1	0 7.64	0.619	1.5	1 23
Tu.	16	1 35 39.67	8.3	9 58 45.7	53.2	15 56.8	0 7.22	0.605	2.5	2 24
We.	17	1 39 21.69	8.3	10 20 1.3	52.7	15 56.6	0 21.73	0.589	3.5	3 26
Th.	18	1 43 4.07	8.3	10 41 6.7	52.3	15 56.3	0 35.87	0.574	4.5	4 29
Fri.	19	1 46 46.82	8.3	11 2 1.4	51.8	15 56.0	0 49.64	0.557	5.5	5 28
Sat.	20	1 50 29.97	8.3	11 22 45.2	51.4	15 55.8	1 3.01	0.541	6.5	6 23
Sun.	21	1 54 13.51	8.3	11 43 17.6	50.9	15 55.5	1 15.99	0.523	7.5	7 13
Mo.	22	1 57 57.47	8.4	12 3 38.4	50.4	15 55.3	1 28.55	0.506	8.5	7 58
Tu.	23	2 1 41.86	8.4	12 23 47.2	49.9	15 55.1	1 40.69	0.487	9.5	8 40
We.	24	2 5 26.69	8.4	12 43 43.7	49.3	15 54.8	1 52.38	0.468	10.5	9 20
Th.	25	2 9 11.97	8.4	13 3 27.6	48.8	15 54.5	2 3.62	0.449	11.5	9 59
Fri.	26	2 12 57.71	8.4	13 22 58.6	48.3	15 54.3	2 14.39	0.429	12.5	10 38
Sat.	27	2 16 43.94	8.4	13 42 16.5	47.7	15 54.1	2 24.68	0.408	13.5	11 18
Sun.	28	2 20 30.67	8.5	14 1 20.8	47.1	15 53.8	2 34.48	0.387	14.5	12 1
Mo.	29	2 24 17.91	8.5	14 20 11.4	46.5	15 53.6	2 43.77	0.365	15.5	12 46
Tu.	30	2 28 5.68	8.5	14 38 48.0	45.9	15 53.3	2 52.53	0.343	16.5	13 34
We.	31	2 31 53.99		N.14 57 10.3		15 53.1	3 0.76		17.5	14 26

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.								
		Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Mo.	1	14 42.8	14 43.8	53 59.5	54 3.3	14 14 16	14 37 21	17 14 55S.	19 30 30S.
Tu.	2	14 45.3	14 47.3	54 8.9	54 16.3	15 1 7	15 25 36	21 34 59	23 26 47
We.	3	14 49.9	14 53.0	54 25.6	54 37.0	15 50 50	16 16 49	25 4 12	26 25 35
Th.	4	14 56.6	15 0.8	54 50.1	55 5.5	16 43 31	17 10 51	27 29 19	28 13 52
Fri.	5	15 5.5	15 10.7	55 22.8	55 42.2	17 38 44	18 7 2	28 37 53	28 40 20
Sat.	6	15 16.6	15 23.0	56 3.7	56 27.2	18 35 34	19 4 12	28 20 24	27 37 42
Sun.	7	15 29.8	15 37.0	56 52.1	57 18.7	19 32 46	20 1 7	26 32 16	25 4 29
Mo.	8	15 44.6	15 52.4	57 46.5	58 15.1	20 29 10	20 56 52	23 15 8	21 5 24
Tu.	9	16 0.2	16 7.9	58 43.8	59 12.1	21 24 9	21 51 5	18 36 43	15 50 52
We.	10	16 15.4	16 22.3	59 39.3	60 4.6	22 17 40	22 44 2	12 49 53	9 36 2
Th.	11	16 28.5	16 33.9	60 27.5	60 47.3	23 10 16	23 36 29	6 11 53S.	2 40 16S.
Fri.	12	16 38.2	16 41.4	61 3.1	61 14.7	0 2 51	0 29 30	0 55 45N.	4 32 50N.
Sat.	13	16 43.2	16 43.7	61 21.5	61 23.1	0 56 34	1 24 11	8 7 25	11 35 44
Sun.	14	16 42.7	16 40.4	61 19.7	61 11.3	1 52 30	2 21 34	14 53 57	17 58 12
Mo.	15	16 36.9	16 32.3	60 58.4	60 41.3	2 51 26	3 22 5	20 44 43	23 10 3
Tu.	16	16 26.5	16 20.1	60 20.3	59 56.6	3 53 25	4 25 17	25 11 10	26 45 43
We.	17	16 13.0	16 5.5	59 30.5	59 3.2	4 57 26	5 29 35	27 52 6	28 29 41
Th.	18	15 57.8	15 50.0	58 34.9	58 6.3	6 1 27	6 32 44	28 38 44	28 20 23
Fri.	19	15 42.4	15 35.0	57 38.3	57 11.3	7 3 13	7 32 41	27 36 26	26 29 15
Sat.	20	15 27.9	15 21.3	56 45.3	56 21.0	8 1 3	8 28 16	25 1 26	23 15 41
Sun.	21	15 15.2	15 9.6	55 58.4	55 37.8	8 54 21	9 19 23	21 14 39	19 0 49
Mo.	22	15 4.5	14 59.9	55 19.2	55 2.5	9 43 27	10 6 40	16 36 26	14 3 35
Tu.	23	14 56.0	14 52.5	54 47.9	54 35.1	10 29 9	10 51 4	11 24 5	8 39 35
We.	24	14 49.6	14 47.1	54 24.4	54 15.4	11 12 30	11 33 38	5 51 36	3 1 29N.
Th.	25	14 45.2	14 43.6	54 8.3	54 2.7	11 54 33	12 15 25	0 10 33N.	2 39 54S.
Fri.	26	14 42.5	14 41.9	53 58.7	53 56.3	12 36 20	12 57 25	5 28 41S.	8 14 29
Sat.	27	14 41.5	14 41.7	53 55.0	53 55.5	13 18 48	13 40 34	10 56 1	13 31 53
Sun.	28	14 42.2	14 43.1	53 57.4	54 0.8	14 2 50	14 25 41	16 0 40	18 20 50
Mo.	29	14 44.3	14 45.9	54 5.3	54 11.0	14 49 11	15 13 24	20 30 45	22 28 45
Tu.	30	14 47.8	14 50.2	54 18.1	54 26.7	15 38 21	16 4 3	24 13 8S.	25 42 9S.
We.	31	14 52.8	14 55.9	54 36.5	54 47.9				

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
1	Regulus W.		69 35 58	3070	71 4 44	3069	72 33 32	3067	74 2 22	3065
	Mars W.		53 37 54	2977	55 8 36	2976	56 39 19	2975	58 10 3	2974
	Jupiter W.		23 30 13	3065	24 58 51	3059	26 27 54	3054	27 57 0	3048
	Antares E.		30 19 59	3068	28 51 10	3067	27 22 20	3065	25 53 27	3064
	Saturn E.		33 30 58	3173	32 4 16	3182	30 37 45	3192	29 11 26	3203
	<i>a</i> Aquilæ E.		85 6 44	3869	83 52 53	3873	82 39 6	3876	81 25 22	3881
2	Regulus W.		81 27 10	3053	82 56 17	3049	84 25 29	3046	85 54 45	3042
	Mars W.		65 44 15	2963	67 15 14	2960	68 46 17	2957	70 17 24	2954
	Jupiter W.		35 24 3	3025	36 53 45	3021	38 23 32	3015	39 53 26	3010
	Spica $\cap$ W.		27 26 8	3051	28 55 18	3047	30 24 33	3043	31 53 52	3040
	Fomalhaut E.		100 8 39	3300	98 44 27	3294	97 20 9	3288	95 55 44	3284
3	Mars W.		77 54 8	2932	79 25 46	2927	80 57 30	2922	82 29 21	2916
	Jupiter W.		47 24 32	2983	48 55 6	2976	50 25 49	2970	51 56 39	2962
	Spica $\cap$ W.		39 21 45	3016	40 51 38	3010	42 21 39	3004	43 51 47	2998
	Fomalhaut E.		88 52 13	3258	87 27 12	3253	86 2 6	3248	84 36 53	3242
	Sun E.		131 55 12	3389	130 32 43	3382	129 10 6	3375	127 47 21	3369
4	Mars W.		90 10 38	2881	91 43 21	2874	93 16 13	2866	94 49 16	2856
	Jupiter W.		59 33 10	2923	61 4 59	2915	62 36 58	2906	64 9 9	2897
	Spica $\cap$ W.		51 24 36	2960	52 55 39	2951	54 26 53	2943	55 58 18	2933
	Fomalhaut E.		77 29 18	3216	76 3 28	3212	74 37 33	3206	73 11 31	3202
	Sun E.		120 51 29	3328	119 27 50	3319	118 4 0	3309	116 39 58	3299
5	Mars W.		102 37 28	2808	104 11 45	2798	105 46 16	2787	107 21 1	2775
	Jupiter W.		71 53 14	2845	73 26 44	2833	75 0 29	2821	76 34 29	2808
	Spica $\cap$ W.		63 38 28	2881	65 11 11	2870	66 44 8	2858	68 17 21	2846
	Antares W.		17 44 36	2883	19 17 17	2871	20 50 13	2859	22 23 24	2847
	Fomalhaut E.		05 59 58	3179	64 33 24	3175	63 6 45	3172	61 40 2	3169
	Sun E.		109 36 45	3242	108 11 26	3230	106 45 52	3217	105 20 3	3204
6	Jupiter W.		84 28 39	2744	86 4 21	2729	87 40 23	2714	89 16 44	2700
	Spica $\cap$ W.		76 7 29	2779	77 42 24	2765	79 17 38	2751	80 53 10	2736
	Antares W.		30 13 28	2780	31 48 22	2766	33 23 35	2751	34 59 7	2736
	Saturn W.		28 36 53	2909	30 9 0	2881	31 41 43	2856	33 14 58	2833
	Fomalhaut E.		54 25 53	3165	52 59 2	3167	51 32 14	3171	50 5 30	3176
	Sun E.		98 6 51	3132	96 39 20	3116	95 11 30	3101	93 43 21	3085
7	Jupiter W.		97 23 33	2621	99 1 59	2605	100 40 47	2588	102 19 58	2572
	Antares W.		43 1 53	2657	44 39 31	2640	46 17 32	2623	47 55 55	2606
	Antares W.		41 8 46	2720	42 44 59	2699	44 21 40	2678	45 58 49	2658
	Fomalhaut E.		42 54 13	3237	41 28 47	3259	40 3 47	3285	38 39 18	3318
	Sun E.		86 17 32	2999	84 47 18	2981	83 16 41	2963	81 45 42	2944
8	Antares W.		56 13 49	2518	57 54 37	2500	59 35 51	2481	61 17 31	2463
	Saturn W.		54 11 29	2556	55 51 24	2536	57 31 47	2516	59 12 38	2497
	<i>a</i> Pegasi E.		52 6 33	2963	50 35 34	2966	49 4 39	2973	47 33 52	2982
	Sun E.		74 4 48	2849	72 31 24	2830	70 57 35	2810	69 23 20	2791
9	Antares W.		69 52 20	2371	71 36 36	2353	73 21 19	2334	75 6 29	2317
	Saturn W.		67 43 49	2398	69 27 26	2379	71 11 31	2360	72 56 3	2341
	<i>a</i> Pegasi E.		40 4 20	3089	38 35 57	3127	37 8 20	3175	35 41 41	3232
	Sun E.		61 25 39	2692	59 48 49	2672	58 11 32	2654	56 33 50	2634

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		h m s		h m s		h m s		h m s	
1	Regulus W.	75 31 14	3063	77 0 9	3061	78 29 7	3059	79 58 7	3056
	Mars W.	59 40 48	2972	61 11 36	2970	62 42 26	2968	64 13 19	2966
	Jupiter W.	29 26 13	3043	30 55 32	3038	32 24 57	3034	33 54 27	3030
	Antares E.	24 24 33	3062	22 55 37	3059	21 26 37	3057	19 57 35	3055
	Saturn E.	27 45 20	3215	26 19 29	3231	24 53 57	3251	23 28 48	3273
	$\alpha$ Aquilæ E.	80 11 43	3887	78 58 10	3893	77 44 43	3900	76 31 23	3908
2	Regulus W.	87 24 6	3038	88 53 32	3033	90 23 4	3029	91 52 41	3023
	Mars W.	71 48 35	2950	73 19 50	2946	74 51 10	2942	76 22 36	2937
	Jupiter W.	41 23 26	3005	42 53 32	3000	44 23 45	2994	45 54 5	2989
	Spica $\mathcal{W}$ W.	33 23 15	3035	34 52 44	3031	36 22 18	3026	37 51 59	3022
	Fomalhaut E.	94 31 14	3279	93 6 38	3273	91 41 55	3269	90 17 7	3264
3	Mars W.	84 1 20	2909	85 33 27	2903	87 5 42	2897	88 38 5	2889
	Jupiter W.	53 27 39	2956	54 58 47	2948	56 30 5	2941	58 1 32	2932
	Spica $\mathcal{W}$ W.	45 22 3	2990	46 52 28	2984	48 23 1	2976	49 53 44	2969
	Fomalhaut E.	83 11 34	3238	81 46 10	3232	80 20 39	3226	78 55 1	3222
	Sun E.	126 24 29	3361	125 1 28	3353	123 38 18	3345	122 14 59	3336
4	Mars W.	96 22 31	2848	97 55 57	2838	99 29 35	2829	101 3 25	2819
	Jupiter W.	65 41 32	2887	67 14 8	2877	68 46 56	2866	70 19 58	2856
	Spica $\mathcal{W}$ W.	57 29 55	2924	59 1 43	2913	60 33 45	2903	62 6 0	2893
	Fomalhaut E.	71 45 24	3196	70 19 10	3192	68 52 51	3188	67 26 27	3183
	Sun E.	115 15 45	3288	113 51 20	3277	112 26 41	3266	111 1 50	3254
5	Mars W.	108 56 2	2763	110 31 18	2752	112 6 49	2739	113 42 37	2726
	Jupiter W.	78 8 46	2797	79 43 18	2784	81 18 7	2770	82 53 14	2757
	Spica $\mathcal{W}$ W.	69 50 49	2834	71 24 33	2820	72 58 35	2808	74 32 53	2794
	Antares W.	23 56 51	2834	25 30 35	2821	27 4 35	2808	28 38 53	2795
	Fomalhaut E.	60 13 16	3167	58 46 27	3166	57 19 37	3164	55 52 45	3164
	Sun E.	103 53 58	3190	102 27 37	3176	101 0 59	3162	99 34 4	3147
6	Jupiter W.	90 53 24	2684	92 30 25	2669	94 7 46	2653	95 45 29	2637
	Spica $\mathcal{W}$ W.	82 29 2	2720	84 5 15	2705	85 41 48	2689	87 18 42	2673
	Antares W.	36 34 59	2721	38 11 11	2705	39 47 44	2689	41 24 38	2674
	Saturn W.	34 48 43	2808	36 23 0	2785	37 57 47	2764	39 33 2	2742
	Fomalhaut E.	48 38 52	3183	47 12 23	3193	45 46 5	3204	44 20 0	3219
	Sun E.	92 14 53	3068	90 46 4	3051	89 16 55	3034	87 47 24	3017
7	Jupiter W.	103 59 32	2554	105 39 30	2537	107 19 52	2520	109 0 38	2502
	Antares W.	49 34 42	2589	51 13 52	2571	52 53 27	2553	54 33 26	2536
	Saturn W.	47 36 25	2638	49 14 29	2617	50 53 1	2596	52 32 1	2576
	Fomalhaut E.	37 15 28	3357	35 52 22	3403	34 30 9	3460	33 9 0	3527
	Sun E.	80 14 19	2925	78 42 32	2907	77 10 22	2888	75 37 48	2868
8	Antares W.	62 59 37	2445	64 42 8	2426	66 25 6	2408	68 8 30	2389
	Saturn W.	60 53 56	2476	62 35 43	2457	64 17 57	2437	66 0 39	2417
	$\alpha$ Pegasi E.	46 3 17	2994	44 32 57	3010	43 2 57	3031	41 33 23	3056
	Sun E.	67 48 40	2771	66 13 34	2751	64 38 2	2731	63 2 4	2711
9	Antares W.	76 52 4	2298	78 38 6	2280	80 24 35	2263	82 11 29	2245
	Saturn W.	74 41 3	2323	76 26 29	2304	78 12 22	2286	79 58 42	2268
	$\alpha$ Pegasi E.	34 16 10	3301	32 52 0	3386	31 29 27	3488	30 8 49	3611
	Sun E.	54 55 41	2615	53 17 7	2596	51 38 6	2577	49 58 40	2560

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Ngon.	P. L. of Diff.	IIIh.	P. L. of Diff.	VIh.	P. L. of Diff.	IXh.	P. L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
10	Antares W.	83 58 49	2228	85 46 35	2212	87 34 45	2195	89 23 20	2178
	Saturn W.	81 45 28	2251	83 32 40	2234	85 20 17	2217	87 8 19	2200
	Sun E.	48 18 50	2541	46 38 34	2523	44 57 53	2507	43 16 49	2490
11	Saturn W.	96 14 23	2126	98 4 42	2113	99 55 21	2100	101 46 20	2088
	a Aquilæ W.	53 42 42	3453	55 3 59	3379	56 26 40	3310	57 50 40	3248
	Sun E.	34 45 47	2414	33 2 32	2400	31 18 58	2388	29 35 6	2376
15	Sun W.	22 7 43	2339	23 52 46	2347	25 37 38	2357	27 22 15	2366
	Pollux E.	64 8 19	2025	62 15 24	2035	60 22 44	2046	58 30 22	2057
	Mars E.	114 26 8	1999	112 32 32	2009	110 39 11	2019	108 46 7	2031
16	Sun W.	36 1 28	2428	37 44 23	2443	39 26 57	2458	41 9 9	2474
	Pollux E.	49 13 11	2123	47 22 47	2138	45 32 46	2153	43 43 8	2169
	Regulus E.	86 1 38	2121	84 11 11	2136	82 21 6	2150	80 31 23	2166
	Mars E.	99 25 39	2098	97 34 37	2113	95 43 58	2128	93 53 41	2144
17	Sun W.	49 34 24	2559	51 14 15	2578	52 53 40	2596	54 32 40	2615
	Venus W.	21 12 11	2703	22 48 47	2713	24 25 10	2725	26 1 17	2738
	Pollux E.	34 41 7	2254	32 54 0	2272	31 7 20	2291	29 21 7	2310
	Regulus E.	71 28 50	2249	69 41 35	2266	67 54 45	2283	66 8 21	2300
	Mars E.	84 48 31	2228	83 0 45	2246	81 13 26	2264	79 26 33	2282
	Jupiter E.	115 43 29	2218	113 55 28	2234	112 7 51	2251	110 20 40	2268
18	Sun W.	62 41 12	2711	64 17 37	2731	65 53 36	2751	67 29 8	2770
	Venus W.	33 57 3	2818	35 31 8	2836	37 4 49	2854	38 38 7	2872
	Aldebaran W.	25 7 21	2801	26 41 48	2772	28 16 53	2752	29 52 24	2738
	Regulus E.	37 22 52	2392	35 39 6	2410	33 55 46	2429	32 12 52	2448
	Mars E.	70 38 52	2375	68 54 41	2394	67 10 57	2412	65 27 39	2431
	Jupiter E.	101 31 13	2358	99 46 38	2376	98 2 29	2394	96 18 46	2412
19	Sun W.	75 20 28	2867	76 53 29	2887	78 26 5	2905	79 58 17	2924
	Venus W.	46 18 45	2965	47 49 42	2984	49 20 15	3002	50 50 26	3021
	Aldebaran W.	37 52 47	2725	39 28 53	2730	41 4 53	2736	42 40 45	2743
	Regulus E.	43 44 52	2539	42 4 33	2556	40 24 38	2574	38 45 8	2593
	Mars E.	56 57 47	2523	55 17 6	2542	53 36 51	2560	51 57 1	2578
	Jupiter E.	87 46 35	2502	86 5 25	2520	84 24 39	2537	82 44 17	2555
20	Sun W.	87 33 27	3014	89 3 22	3032	90 32 55	3049	92 2 7	3065
	Venus W.	58 15 42	3110	59 43 40	3127	61 11 17	3143	62 38 34	3160
	Aldebaran W.	50 37 22	2790	52 12 3	2801	53 46 29	2812	55 20 41	2824
	Regulus E.	30 33 40	2680	28 56 33	2696	27 19 48	2713	25 43 26	2730
	Mars E.	43 43 52	2664	42 6 24	2681	40 29 18	2697	38 52 34	2713
	Jupiter E.	74 28 21	2638	72 50 18	2654	71 12 36	2670	69 35 16	2685
21	Sun W.	99 23 9	3145	100 50 24	3159	102 17 22	3174	103 44 2	3188
	Venus W.	69 50 6	3239	71 15 29	3253	72 40 35	3268	74 5 24	3282
	Aldebaran W.	63 8 1	2880	64 40 45	2891	66 13 15	2902	67 45 31	2913
	Mars E.	30 54 8	2789	29 19 26	2804	27 45 3	2818	26 10 59	2832
	Jupiter E.	61 33 36	2759	59 58 14	2772	58 23 10	2785	56 48 23	2798
	Spica 𐌆 E.	71 42 24	2789	70 7 42	2803	68 33 18	2817	66 59 12	2829
22	Sun W.	110 53 21	3253	112 18 27	3265	113 43 20	3277	115 7 59	3288
	Venus W.	81 5 31	3346	82 28 49	3358	83 51 53	3370	85 14 44	3381
	Pollux W.	31 41 59	2898	33 14 21	2907	34 46 31	2918	36 18 27	2927

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month	Star's Name and Position.		Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
			0 / /		0 / /		0 / /		0 / /	
10	Antares W.	91 12 20	2163	93 1 44	2147	94 51 31	2132	96 41 41	2118	
	Saturn W.	88 56 46	2184	90 45 37	2170	92 34 50	2155	94 24 26	2141	
	Sun E.	41 35 21	2473	39 53 30	2457	38 11 17	2442	36 28 42	2428	
11	Saturn W.	103 37 38	2077	105 29 12	2066	107 21 3	2057	109 13 9	2048	
	α Aquilæ W.	59 15 52	3190	60 42 13	3138	62 9 36	3089	63 37 59	3046	
	Sun E.	27 50 57	2366	26 6 34	2357	24 21 57	2349	22 37 9	2342	
15	Sun W.	29 6 38	2376	30 50 47	2388	32 34 39	2401	34 18 13	2414	
	Pollux E.	56 38 17	2069	54 46 30	2082	52 55 3	2096	51 3 57	2109	
	Mars E.	106 53 22	2044	105 0 56	2056	103 8 49	2070	101 17 3	2084	
16	Sun W.	42 50 59	2490	44 32 26	2507	46 13 30	2525	47 54 9	2542	
	Pollux E.	41 53 54	2186	40 5 5	2202	38 16 40	2219	36 28 41	2236	
	Regulus E.	78 42 4	2182	76 53 9	2198	75 4 38	2214	73 16 32	2231	
	Mars E.	92 3 49	2161	90 14 22	2177	88 25 19	2194	86 36 42	2211	
17	Sun W.	56 11 14	2635	57 49 22	2653	59 27 5	2672	61 4 22	2692	
	Venus W.	27 37 6	2752	29 12 37	2768	30 47 47	2784	32 22 36	2801	
	Pollux E.	27 35 22	2329	25 50 5	2348	24 5 16	2369	22 20 57	2390	
	Regulus E.	64 22 22	2319	62 36 50	2337	60 51 45	2355	59 7 5	2373	
	Mars E.	77 40 7	2300	75 54 8	2319	74 8 36	2337	72 23 30	2356	
	Jupiter E.	108 33 54	2287	106 47 35	2304	105 1 41	2322	103 16 14	2340	
18	Sun W.	69 4 15	2790	70 38 56	2809	72 13 12	2829	73 47 2	2848	
	Venus W.	40 11 2	2891	41 43 33	2909	43 15 41	2928	44 47 25	2946	
	Aldebaran W.	31 28 14	2729	33 4 16	2723	34 40 25	2722	36 16 36	2722	
	Regulus E.	50 30 25	2465	48 48 23	2481	47 6 47	2502	45 25 37	2520	
	Mars E.	63 44 48	2450	62 2 24	2468	60 20 26	2486	58 38 53	2505	
	Jupiter E.	94 35 28	2431	92 52 37	2448	91 10 11	2466	89 28 10	2484	
19	Sun W.	81 30 5	2943	83 1 30	2961	84 32 32	2979	86 3 11	2997	
	Venus W.	52 20 13	3039	53 49 38	3056	55 18 41	3074	56 47 22	3092	
	Aldebaran W.	44 16 28	2751	45 52 0	2760	47 27 20	2769	49 2 28	2780	
	Regulus E.	37 6 3	2610	35 27 22	2628	33 49 5	2645	32 11 11	2662	
	Mars E.	50 17 36	2595	48 38 34	2613	46 59 57	2630	45 21 43	2647	
	Jupiter E.	81 4 20	2571	79 24 45	2589	77 45 35	2605	76 6 47	2621	
20	Sun W.	93 30 59	3082	94 59 30	3098	96 27 42	3114	97 55 35	3129	
	Venus W.	64 5 31	3177	65 32 8	3193	66 58 26	3209	68 24 25	3224	
	Aldebaran W.	56 54 38	2835	58 28 21	2846	60 1 49	2858	61 35 2	2869	
	Regulus E.	24 7 26	2747	22 31 49	2764	20 56 34	2782	19 21 42	2799	
	Mars E.	37 16 12	2729	35 40 11	2744	34 4 30	2760	32 29 9	2775	
	Jupiter E.	67 58 16	2701	66 21 37	2715	64 45 17	2730	63 9 17	2744	
21	Sun W.	105 10 25	3202	106 36 32	3215	108 2 24	3228	109 28 0	3241	
	Venus W.	75 29 56	3296	76 54 12	3308	78 18 14	3322	79 42 0	3335	
	Aldebaran W.	69 17 33	2924	70 49 21	2935	72 20 56	2945	73 52 17	2955	
	Mars E.	24 37 12	2845	23 3 43	2859	21 30 31	2872	19 57 36	2884	
	Jupiter E.	55 13 53	2811	53 39 40	2824	52 5 44	2836	50 32 3	2848	
	Spica ♀ E.	65 25 22	2842	63 51 48	2854	62 18 30	2866	60 45 27	2877	
22	Sun W.	116 32 25	3298	117 56 39	3309	119 20 40	3319	120 44 30	3328	
	Venus W.	86 37 22	3392	87 59 48	3401	89 22 3	3412	90 44 6	3421	
	Pollux W.	37 50 12	2935	39 21 46	2945	40 53 8	2954	42 24 19	2962	

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
			o / "		o / "		o / "		o / "	
22	Jupiter	E.	48 58 37	2860	47 25 27	2871	45 52 31	2882	44 19 49	2892
	Spica $\eta$	E.	59 12 39	2888	57 40 5	2899	56 7 45	2910	54 35 39	2919
	Saturn	E.	106 45 49	2905	105 13 37	2916	103 41 38	2926	102 9 52	2935
23	Sun	W.	122 8	93338	123 31 37	3347	124 54 54	3355	126 18	23364
	Venus	W.	92 5 59	3431	93 27 41	3439	94 49 13	3447	96 10 37	3455
	Pollux	W.	43 55 20	2970	45 26 11	2977	46 56 53	2985	48 27 25	2992
	Jupiter	E.	36 39 36	2943	35 8 11	2951	33 36 57	2961	32 5 55	2970
	Spica $\eta$	E.	46 58 6	2964	45 27 8	2972	43 56 20	2980	42 25 42	2987
	Saturn	E.	94 33 52	2978	93 3 12	2985	91 32 41	2993	90 2 20	3000
24	Venus	W.	102 55 26	3490	104 16 1	3496	105 36 30	3501	106 56 53	3507
	Pollux	W.	55 58 3	3023	57 27 49	3026	58 57 29	3032	60 27 2	3036
	Regulus	W.	19 11 52	3038	20 41 18	3041	22 10 40	3043	23 39 59	3047
	Spica $\eta$	E.	34 54 38	3018	33 24 48	3023	31 55 4	3028	30 25 26	3034
	Antares	E.	80 48 51	3018	79 19 0	3023	77 49 16	3028	76 19 38	3033
	Saturn	E.	82 32 39	3031	81 3 5	3037	79 33 38	3043	78 4 18	3048
25	Pollux	W.	67 53 32	3055	69 22 37	3058	70 51 38	3061	72 20 36	3062
	Regulus	W.	31 5 39	3060	32 34 37	3062	34 3 33	3064	35 32 26	3066
	Mars	W.	17 49 21	3074	19 18 2	3076	20 46 41	3078	22 15 17	3081
	Antares	E.	68 52 49	3052	67 23 41	3055	65 54 36	3057	64 25 34	3060
	Saturn	E.	70 39 2	3069	69 10 14	3072	67 41 30	3075	66 12 50	3078
26	Pollux	W.	79 44 50	3071	81 13 35	3072	82 42 19	3073	84 11 2	3074
	Regulus	W.	42 56 22	3073	44 25 4	3073	45 53 46	3074	47 22 27	3075
	Mars	W.	29 37 39	3090	31 6 1	3091	32 34 22	3092	34 2 41	3094
	Antares	E.	57 1 4	3068	55 32 15	3069	54 3 28	3070	52 34 42	3071
	Saturn	E.	58 50 24	3093	57 22 6	3096	55 53 51	3098	54 25 39	3100
27	Regulus	W.	54 45 49	3074	56 14 31	3073	57 43 14	3072	59 11 58	3072
	Mars	W.	41 24 3	3095	42 53 19	3095	44 20 35	3095	45 48 51	3094
	Antares	E.	45 10 58	3070	43 42 12	3070	42 13 26	3069	40 44 39	3069
	Saturn	E.	47 5 17	3111	45 37 21	3114	44 9 28	3117	42 41 39	3119
	$\alpha$ Aquilæ	E.	97 28 7	3872	96 14 19	3866	95 0 25	3862	93 46 27	3859
28	Regulus	W.	66 35 58	3063	68 4 53	3061	69 33 50	3060	71 2 49	3057
	Mars	W.	53 10 25	3089	54 38 48	3087	56 7 13	3086	57 35 40	3084
	Jupiter	W.	23 42 26	3059	25 11 26	3054	26 40 32	3048	28 9 45	3043
	Antares	E.	33 20 22	3061	31 51 25	3059	30 22 25	3057	28 53 23	3055
	Saturn	E.	35 23 32	3140	33 56 11	3146	32 28 57	3153	31 1 52	3161
	$\alpha$ Aquilæ	E.	87 35 55	3851	86 21 45	3852	85 7 36	3853	83 53 28	3855
29	Regulus	W.	78 28 34	3043	79 57 54	3040	81 27 17	3036	82 56 45	3032
	Mars	W.	64 58 32	3073	66 27 15	3069	67 56 2	3067	69 24 52	3064
	Jupiter	W.	35 37 15	3022	37 7 1	3018	38 36 52	3013	40 6 49	3008
	Spica $\eta$	W.	24 27 9	3041	25 56 31	3038	27 25 57	3034	28 55 28	3031
	$\alpha$ Aquilæ	E.	77 43 35	3877	76 29 52	3885	75 16 17	3893	74 2 50	3902
30	Mars	W.	76 50 4	3046	78 19 20	3042	79 48 41	3037	81 18 8	3033
	Jupiter	W.	47 37 57	2985	49 8 28	2981	50 39 5	2975	52 9 49	2970
	Spica $\eta$	W.	36 24 10	3010	37 54 10	3006	39 24 15	3001	40 54 27	2996
	Fomalhaut	E.	91 41 53	3256	90 16 50	3251	88 51 41	3247	87 26 27	3242

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
22	Jupiter	E.	42 47 20	2903	41 15 5	2913	39 43 3	2923	38 11 13	2933
	Spica ♏	E.	53 3 44	2929	51 32 2	2939	50 0 32	2948	48 29 14	2956
	Saturn	E.	100 38 17	2944	99 6 54	2954	97 35 43	2962	96 4 42	2970
23	Sun	W.	127 41 0	3372	129 3 49	3379	130 26 29	3386	131 49 1	3394
	Venus	W.	97 31 51	3463	98 52 56	3470	100 13 54	3477	101 34 44	3484
	Pollux	W.	49 57 48	2998	51 28 4	3005	52 58 11	3010	54 28 11	3017
	Jupiter	E.	30 35 5	2978	29 4 25	2988	27 33 57	2997	26 3 41	3006
	Spica ♏	E.	40 55 13	2994	39 24 53	3000	37 54 40	3007	36 24 36	3012
	Saturn	E.	88 32 7	3007	87 2 3	3014	85 32 8	3019	84 2 19	3026
24	Venus	W.	108 17 9	3512	109 37 20	3516	110 57 26	3521	112 17 27	3525
	Pollux	W.	61 56 30	3041	63 25 52	3044	64 55 10	3048	66 24 23	3051
	Regulus	W.	25 9 14	3050	26 38 25	3052	28 7 33	3055	29 36 38	3058
	Spica ♏	E.	28 55 55	3038	27 26 29	3041	25 57 7	3046	24 27 51	3049
	Antares	E.	74 50 6	3038	73 20 40	3042	71 51 19	3045	70 22 2	3048
	Saturn	E.	76 35 4	3052	75 5 55	3056	73 36 52	3061	72 7 55	3065
25	Pollux	W.	73 49 32	3065	75 18 24	3066	76 47 15	3068	78 16 3	3069
	Regulus	W.	37 1 17	3068	38 30 6	3069	39 58 53	3071	41 27 38	3072
	Mars	W.	23 43 50	3083	25 12 21	3085	26 40 49	3087	28 9 15	3088
	Antares	E.	62 56 35	3062	61 27 39	3064	59 58 45	3066	58 29 54	3067
	Saturn	E.	64 44 13	3081	63 15 40	3084	61 47 11	3087	60 18 45	3091
26	Pollux	W.	85 39 44	3074	87 8 26	3074	88 37 7	3074	90 5 49	3075
	Regulus	W.	48 51 7	3074	50 19 48	3075	51 48 28	3075	53 17 8	3074
	Mars	W.	35 30 58	3094	36 59 15	3094	38 27 32	3095	39 55 48	3096
	Antares	E.	51 5 57	3071	49 37 12	3071	48 8 27	3072	46 39 43	3071
	Saturn	E.	52 57 29	3102	51 29 22	3105	50 1 18	3106	48 33 16	3109
27	Regulus	W.	60 40 42	3070	62 9 28	3069	63 38 16	3067	65 7 6	3065
	Mars	W.	47 17 8	3093	48 45 26	3093	50 13 44	3092	51 42 4	3091
	Antares	E.	39 15 51	3067	37 47 1	3066	36 18 10	3065	34 49 17	3063
	Saturn	E.	41 13 53	3123	39 46 11	3126	38 18 33	3130	36 51 0	3134
	$\alpha$ Aquilæ	E.	92 32 26	3856	91 18 21	3854	90 4 14	3852	88 50 5	3851
28	Regulus	W.	72 31 51	3055	74 0 56	3051	75 30 5	3048	76 59 18	3046
	Mars	W.	59 4 9	3082	60 32 41	3080	62 1 15	3078	63 29 52	3075
	Jupiter	W.	29 39 4	3039	31 8 28	3035	32 37 58	3030	34 7 34	3026
	Antares	E.	27 24 18	3052	25 55 10	3050	24 25 59	3047	22 56 45	3044
	Saturn	E.	29 34 56	3171	28 8 12	3183	26 41 42	3196	25 15 28	3214
	$\alpha$ Aquilæ	E.	82 39 22	3857	81 25 19	3860	80 11 19	3865	78 57 24	3871
29	Regulus	W.	84 26 18	3029	85 55 54	3025	87 25 36	3021	88 55 23	3017
	Mars	W.	70 53 46	3061	72 22 44	3057	73 51 46	3053	75 20 53	3050
	Jupiter	W.	41 36 52	3004	43 7 0	3000	44 37 13	2995	46 7 32	2990
	Spica ♏	W.	30 25 3	3027	31 54 42	3023	33 24 26	3019	34 54 15	3014
	$\alpha$ Aquilæ	E.	72 49 32	3913	71 36 25	3924	70 23 30	3936	69 10 47	3951
30	Mars	W.	82 47 40	3029	84 17 17	3023	85 47 1	3018	87 16 51	3013
	Jupiter	W.	53 40 39	2965	55 11 36	2960	56 42 39	2954	58 13 50	2948
	Spica ♏	W.	42 24 45	2991	43 55 9	2986	45 25 39	2980	46 56 17	2975
	Fomalhaut	E.	86 1 8	3238	84 35 44	3234	83 10 15	3230	81 44 42	3227

## AT APPARENT NOON.

MEAN  
TIME.THE  
MOON'S

## THE SUN'S

Equation  
of Time,  
to be  
sub. fm.  
Apparent  
Time.

Day of the Week.	Day of the Month.	THE SUN'S					Equation of Time, to be sub. fm. Apparent Time.	Diff. for 1 h.	THE MOON'S	
		Apparent Rt. Ascen.	Diff. for 1 h.	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.			Age.	Meri- dian Pas- sage.
		h m s	s	° ' "	"	' "	m s	s	d	h m
We.	1	2 31 53.99	9.5	N.14 57 10.3	45.3	15 53.1	3 0.76	0.320	17.5	14 26
Th.	2	2 35 42.84	9.6	15 15 17.8	44.7	15 52.9	3 8.45	0.297	18.5	15 20
Fri.	3	2 39 32.26	9.6	15 33 10.4	44.1	15 52.6	3 15.58	0.273	19.5	16 14
Sat.	4	2 43 22.24	9.6	15 50 47.8	43.4	15 52.4	3 22.14	0.250	20.5	17 8
Sun.	5	2 47 12.78	9.6	16 8 9.6	42.8	15 52.2	3 28.14	0.226	21.5	18 0
Mo.	6	2 51 3.91	9.7	16 25 15.5	42.1	15.51.9	3 33.56	0.201	22.5	18 51
Tu.	7	2 54 55.63	9.7	16 42 5.2	41.4	15 51.7	3 38.38	0.177	23.5	19 40
We.	8	2 58 47.92	9.7	16 58 38.3	40.7	15 51.5	3 42.62	0.153	24.5	20 28
Th.	9	3 2 40.80	9.7	17 14 54.6	40.0	15 51.3	3 46.29	0.127	25.5	21 17
Fri.	10	3 6 34.28	9.8	17 30 53.6	39.2	15 51.0	3 49.35	0.103	26.5	22 9
Sat.	11	3 10 28.35	9.8	17 46 35.2	38.5	15 50.8	3 51.83	0.079	27.5	23 4
Sun.	12	3 14 23.00	9.8	18 1 59.0	37.7	15 50.6	3 53.72	0.055	28.5	♂
Mo.	13	3 18 18.25	9.8	18 17 4.6	37.0	15 50.4	3 55.03	0.031	0.2	0 3
Tu.	14	3 22 14.07	9.9	18 31 51.9	36.2	15 50.2	3 55.76	0.007	1.2	1 6
We.	15	3 26 10.47	9.9	18 46 20.4	35.4	15 50.0	3 55.93	0.017	2.2	2 11
Th.	16	3 30 7.43	9.9	19 0 30.0	34.6	15 49.8	3 55.53	0.040	3.2	3 14
Fri.	17	3 34 4.95	9.9	19 14 20.2	33.8	15 49.6	3 54.57	0.063	4.2	4 13
Sat.	18	3 38 3.02	9.9	19 27 50.8	33.0	15 49.5	3 53.07	0.086	5.2	5 6
Sun.	19	3 42 1.64	10.0	19 41 1.6	32.1	15 49.3	3 51.01	0.108	6.2	5 54
Mo.	20	3 46 0.79	10.0	19 53 52.2	31.3	15 49.1	3 48.42	0.130	7.2	6 38
Tu.	21	3 50 0.47	10.0	20 6 22.5	30.4	15 48.9	3 45.31	0.151	8.2	7 19
We.	22	3 54 0.66	10.0	20 18 32.1	29.5	15 48.8	3 41.69	0.173	9.2	7 58
Th.	23	3 58 1.37	10.1	20 30 20.8	28.7	15 48.6	3 37.54	0.194	10.2	8 37
Fri.	24	4 2 2.59	10.1	20 41 48.5	27.8	15 48.4	3 32.88	0.215	11.2	9 17
Sat.	25	4 6 4.32	10.1	20 52 54.9	26.9	15 48.3	3 27.72	0.235	12.2	9 59
Sun.	26	4 10 6.54	10.1	21 3 39.8	26.0	15 48.1	3 22.07	0.256	13.2	10 43
Mo.	27	4 14 9.26	10.1	21 14 3.0	25.1	15 48.0	3 15.93	0.276	14.2	11 31
Tu.	28	4 18 12.46	10.2	21 24 4.3	24.1	15 47.8	3 9.31	0.296	15.2	12 21
We.	29	4 22 16.12	10.2	21 33 43.5	23.2	15 47.7	3 2.22	0.315	16.2	13 15
Th.	30	4 26 20.26	10.2	21 43 0.4	22.3	15 47.5	2 54.67	0.333	17.2	14 10
Fri.	31	4 30 24.85	10.2	21 51 54.9	21.3	15 47.4	2 46.67	0.352	18.2	15 4
Sat.	32	4 34 29.87		N.22 0 26.6		15 47.3	2 38.23		19.2	15 57

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.	THE MOON'S							
		Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		° ' "	° ' "	° ' "	° ' "	h m s	h m s	° ' "	° ' "
We.	1	14 52.8	14 55.9	54 36.5	54 47.9	16 30 28	16 57 30	26 54 8S.	27 47 33S.
Th.	2	14 59.4	15 3.3	55 0.6	55 15.0	17 25 5	17 53 3	28 21 4	28 33 35
Fri.	3	15 7.6	15 12.3	55 30.6	55 47.8	18 21 16	18 49 32	28 24 23	27 53 9
Sat.	4	15 17.4	15 22.8	56 6.5	56 26.6	19 17 43	19 45 40	26 59 54	25 45 6
Sun.	5	15 28.8	15 34.9	56 48.3	57 10.9	20 13 16	20 40 27	24 9 33	22 14 20
Mo.	6	15 41.4	15 48.2	57 34.8	57 59.7	21 7 12	21 33 32	20 0 48	17 30 29
Tu.	7	15 55.1	16 2.0	58 24.9	58 50.1	21 59 28	22 25 7	14 45 5	11 46 29
We.	8	16 8.8	16 15.3	59 15.1	59 39.0	22 50 34	23 15 57	8 36 41	5 17 52S.
Th.	9	16 21.4	16 26.9	60 1.4	60 21.6	23 41 24	0 7 5	1 52 25S.	1 37 1N.
Fri.	10	16 31.6	16 35.4	60 38.9	60 52.9	0 33 9	0 59 45	5 7 35N.	8 36 4
Sat.	11	16 38.1	16 39.7	61 2.8	61 8.5	1 27 4	1 55 11	11 59 3	15 12 49
Sun.	12	16 40.0	16 39.0	61 9.6	61 5.9	2 24 14	2 54 16	18 13 30	20 57 10
Mo.	13	16 36.6	16 33.1	60 57.4	60 44.5	3 25 14	3 57 3	23 20 1	25 18 37
Tu.	14	16 28.5	16 22.9	60 27.4	60 6.8	4 29 32	5 2 25	26 50 9	27 52 39
We.	15	16 16.4	16 9.3	59 43.1	59 17.0	5 35 21	6 8 0	28 25 11	28 27 57
Th.	16	16 1.8	15 54.0	58 49.5	58 20.9	6 40 2	7 11 9	28 2 10	27 9 54
Fri.	17	15 46.1	15 38.4	57 52.1	57 23.6	7 41 10	8 9 57	25 53 51	24 17 0
Sat.	18	15 30.9	15 23.7	56 56.1	56 29.9	8 37 29	9 3 48	22 22 29	20 13 14
Sun.	19	15 17.1	15 10.9	56 5.4	55 42.7	9 28 58	9 53 6	17 52 0	15 21 15
Mo.	20	15 5.3	15 0.4	55 22.2	55 4.1	10 16 20	10 35 50	12 43 10	9 59 36
Tu.	21	14 56.1	14 52.4	54 48.4	54 34.9	11 0 43	11 22 9	7 12 13	4 22 30N.
We.	22	14 49.4	14 47.0	54 23.9	54 15.0	11 43 16	12 4 13	1 31 46N.	1 18 47S.
Th.	23	14 45.2	14 43.9	54 8.4	54 3.7	12 25 7	12 46 8	4 7 58S.	6 54 37
Fri.	24	14 43.2	14 43.1	54 1.2	54 0.6	13 7 21	13 28 55	9 37 32	12 15 29
Sat.	25	14 43.4	14 44.1	54 1.7	54 4.3	13 50 56	14 13 31	14 47 6	17 10 59
Sun.	26	14 45.3	14 46.8	54 8.7	54 14.4	14 36 44	15 0 40	19 25 34	21 29 11
Mo.	27	14 48.7	14 51.0	54 21.4	54 29.6	15 25 21	15 50 50	23 20 5	24 56 29
Tu.	28	14 53.6	14 56.4	54 39.1	54 49.5	16 17 4	16 44 1	26 16 35	27 18 41
We.	29	14 59.6	15 2.9	55 1.1	55 13.5	17 11 34	17 39 34	28 1 15	28 23 1
Th.	30	15 6.5	15 10.4	55 26.7	55 40.8	18 7 52	18 36 17	28 23 6	28 1 2
Fri.	31	15 14.4	15 18.6	55 55.5	56 11.0	19 4 37	19 32 43	27 16 47	26 10 49S.
Sat.	32	15 23.0	15 27.7	56 27.3	56 44.3	20 0 27		24 43 58S.	

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
1	Mars	W.	88 46 47	3008	90 16 50	3002	91 47 0	2997	93 17 17	2990
	Jupiter	W.	59 45 8	2943	61 16 33	2936	62 48 6	2929	64 19 48	2923
	Spica ☿	W.	48 27 1	2969	49 57 53	2962	51 28 54	2957	53 0 1	2951
	Fomalhaut	E.	80 19 5	3223	78 53 23	3220	77 27 38	3217	76 1 49	3214
2	Mars	W.	100 50 42	2958	102 21 48	2949	103 53 5	2941	105 24 32	2935
	Jupiter	W.	72 0 22	2887	73 32 57	2886	75 5 41	2872	76 38 36	2864
	Spica ☿	W.	60 37 43	2915	62 9 43	2906	63 41 54	2899	65 14 14	2891
	Fomalhaut	E.	68 51 56	3203	67 25 50	3202	65 59 43	3201	64 33 35	3200
	Sun	E.	138 48 36	3291	137 24 14	3282	135 59 42	3272	134 34 58	3263
3	Jupiter	W.	84 25 53	2819	85 59 56	2810	87 34 11	2801	89 8 38	2790
	Spica ☿	W.	72 58 41	2846	74 32 9	2836	76 5 50	2826	77 39 44	2815
	Antares	W.	27 4 30	2847	28 37 57	2836	30 11 38	2826	31 45 32	2816
	Saturn	W.	26 45 23	2979	28 16 2	2954	29 47 13	2930	31 18 54	2909
	Fomalhaut	E.	57 23 1	3208	55 57 1	3212	54 31 6	3217	53 5 17	3223
	Sun	E.	127 28 25	3211	126 2 29	3200	124 36 20	3189	123 9 58	3178
4	Jupiter	W.	97 4 22	2736	98 40 14	2725	100 16 21	2713	101 52 44	2701
	Antares	W.	39 38 28	2761	41 13 47	2750	42 49 21	2737	44 25 12	2725
	Saturn	W.	39 3 36	2818	40 37 41	2801	42 12 7	2784	43 46 56	2769
	Fomalhaut	E.	45 58 37	3280	44 34 2	3299	43 9 49	3320	41 46 0	3346
	a Pegasi	E.	67 18 49	3070	65 50 3	3066	64 21 12	3064	62 52 18	3060
	Sun	E.	115 54 35	3116	114 26 45	3104	112 58 40	3091	111 30 19	3078
5	Jupiter	W.	109 58 47	2638	111 36 51	2624	113 15 14	2610	114 53 55	2596
	Antares	W.	52 28 36	2660	54 6 10	2646	55 44 2	2632	57 22 13	2618
	Saturn	W.	51 46 13	2689	53 23 8	2673	55 0 24	2657	56 38 1	2642
	a Pegasi	E.	55 27 9	3059	53 58 9	3061	52 29 12	3066	51 0 21	3073
	Sun	E.	104 4 20	3006	102 34 15	2992	101 3 52	2977	99 33 10	2961
6	Antares	W.	65 38 5	2545	67 18 16	2529	68 58 49	2514	70 39 42	2498
	Saturn	W.	64 51 30	2561	66 31 18	2545	68 11 28	2530	69 52 0	2513
	a Pegasi	E.	43 39 4	3143	42 11 47	3167	40 44 59	3198	39 18 47	3234
	Sun	E.	91 54 43	2882	90 22 1	2866	88 48 58	2849	87 15 34	2832
7	Antares	W.	79 9 41	2419	80 52 48	2403	82 36 18	2388	84 20 10	2372
	Saturn	W.	78 20 24	2431	80 3 14	2415	81 46 27	2399	83 30 3	2384
	Sun	E.	79 23 5	2748	77 47 29	2731	76 11 31	2714	74 35 10	2698
8	Antares	W.	93 5 18	2293	94 51 28	2277	96 38 1	2262	98 24 56	2247
	Saturn	W.	92 13 48	2304	93 59 42	2289	95 45 58	2274	97 32 36	2259
	Sun	E.	66 27 47	2614	64 49 11	2599	63 10 14	2582	61 30 54	2566
9	Saturn	W.	106 31 9	2189	108 19 53	2176	110 8 56	2164	111 58 18	2153
	a Aquilæ	W.	60 18 38	3270	61 43 25	3219	63 9 12	3172	64 35 55	3128
	Sun	E.	53 8 59	2492	51 27 35	2479	49 45 53	2466	48 3 52	2454
10	a Aquilæ	W.	72 1 35	2954	73 32 45	2927	75 4 29	2902	76 36 45	2880
	Fomalhaut	W.	43 28 50	2618	45 7 21	2574	46 46 52	2535	48 27 17	2499
	a Pegasi	W.	25 26 44	3963	26 39 0	3717	27 55 29	3514	29 15 38	3343
	Sun	E.	39 29 42	2401	37 46 9	2393	36 2 25	2386	34 18 30	2380
15	Sun	W.	31 0 41	2555	32 40 38	2568	34 20 17	2583	35 59 35	2598
	Regulus	E.	63 6 15	2211	61 18 4	2227	59 30 17	2244	57 42 55	2261

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Day of the Month.	Star's Name and Position.	Midnight.			P.L. of Diff.	XVh.			P.L. of Diff.	XVIIIh.			P.L. of Diff.	XXIh.			P.L. of Diff.
		°	'	"		°	'	"		°	'	"		°	'	"	
1	Mars W.	94	47	42	2984	96	18	15	2977	97	48	56	2971	99	19	45	2965
	Jupiter W.	65	51	37	2916	67	23	35	2909	68	55	42	2903	70	27	57	2895
	Spica ☿ W.	54	31	15	2943	56	2	39	2937	57	34	11	2929	59	5	53	2923
	Fomalhaut E.	74	35	56	3211	73	10	0	3209	71	44	1	3207	70	18	0	3204
2	Mars W.	106	56	7	2927	108	27	52	2918	109	59	48	2909	111	31	55	2900
	Jupiter W.	78	11	41	2856	79	44	57	2847	81	18	24	2838	82	52	3	2829
	Spica ☿ W.	66	46	45	2882	68	19	27	2873	69	52	20	2864	71	25	25	2856
	Fomalhaut E.	63	7	26	3200	61	41	17	3202	60	15	10	3203	58	49	5	3204
	Sun E.	133	10	3	3253	131	44	57	3242	130	19	38	3233	128	54	8	3222
3	Jupiter W.	90	43	19	2779	92	18	14	2769	93	53	22	2758	95	28	45	2747
	Spica ☿ W.	79	13	52	2805	80	48	13	2795	82	22	48	2783	83	57	38	2772
	Antares W.	33	19	39	2806	34	53	59	2795	36	28	34	2783	38	3	24	2772
	Saturn W.	32	51	2	2889	34	23	35	2870	35	56	32	2852	37	29	53	2835
	Fomalhaut E.	51	39	35	3231	50	14	2	3240	48	48	40	3251	47	23	31	3264
4	Sun E.	121	43	22	3166	120	16	32	3154	118	49	28	3142	117	22	9	3129
	Jupiter W.	103	29	23	2689	105	6	18	2675	106	43	31	2663	108	21	0	2650
	Antares W.	46	1	19	2713	47	37	42	2699	49	14	23	2687	50	51	20	2673
	Saturn W.	45	22	5	2752	46	57	36	2737	48	33	27	2720	50	9	40	2705
	Fomalhaut E.	40	22	42	3375	38	59	57	3410	37	37	52	3452	36	16	34	3500
5	a Pegasi E.	61	23	19	3057	59	54	17	3056	58	25	14	3056	56	56	11	3057
	Sun E.	110	1	42	3064	108	32	48	3049	107	3	36	3035	105	34	7	3021
	Jupiter W.	116	32	55	2583	118	12	14	2569	119	51	52	2554	121	31	51	2540
	Antares W.	59	0	43	2604	60	39	33	2589	62	18	43	2574	63	58	14	2559
	Saturn W.	58	15	59	2626	59	54	19	2610	61	33	1	2594	63	12	4	2577
6	a Pegasi E.	49	31	39	3082	48	3	7	3092	46	34	48	3106	45	6	46	3123
	Sun E.	98	2	8	2946	96	30	47	2930	94	59	6	2914	93	27	5	2898
	Antares W.	72	20	58	2482	74	2	36	2467	75	44	35	2451	77	26	57	2436
	Saturn W.	71	32	55	2497	73	14	13	2480	74	55	54	2464	76	37	58	2448
	a Pegasi E.	37	53	18	3277	36	28	39	3327	35	4	59	3387	33	42	28	3461
7	Sun E.	85	41	48	2815	84	7	40	2798	82	33	10	2782	80	58	19	2765
	Antares W.	86	4	25	2355	87	49	4	2339	89	34	6	2324	91	19	30	2308
	Saturn W.	85	14	1	2367	86	58	24	2351	88	43	9	2335	90	28	17	2319
	Sun E.	72	58	27	2680	71	21	20	2664	69	43	52	2647	68	6	1	2630
	Antares W.	100	12	14	2232	101	59	54	2217	103	47	56	2202	105	36	20	2188
8	Saturn W.	99	19	36	2244	101	6	58	2230	102	54	41	2216	104	42	45	2202
	Sun E.	59	51	13	2551	58	11	10	2536	56	30	47	2521	54	50	3	2507
	Saturn W.	113	47	57	2141	115	37	54	2130	117	28	7	2120	119	18	35	2111
	a Aquilæ W.	66	3	31	3087	67	31	56	3050	69	1	7	3015	70	31	1	2983
	Sun E.	46	21	34	2442	44	38	59	2431	42	56	8	2420	41	13	2	2410
9	a Aquilæ W.	78	9	29	2861	79	42	38	2843	81	16	10	2828	82	50	1	2815
	Fomalhaut W.	50	8	32	2467	51	50	32	2438	53	33	13	2412	55	16	31	2389
	a Pegasi W.	30	39	0	3197	32	5	13	3073	33	33	56	2967	35	4	50	2877
	Sun E.	32	34	27	2375	30	50	17	2373	29	6	3	2371	27	21	46	2371
	Sun W.	37	38	33	2613	39	17	10	2630	40	55	24	2647	42	33	15	2664
15	Regulus E.	55	55	58	2278	54	9	26	2296	52	23	20	2313	50	37	39	2331



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Day of the Month	Star's Name and Position.		Midnight.			P.L. of Diff.	XVh.			P.L. of Diff.	XVIIIh.			P.L. of Diff.	XXIh.			P.L. of Diff.
			°	'	"		°	'	"		°	'	"		°	'	"	
15	Mars	E.	72	12	40	2352	70	27	56	2369	68	43	37	2388	66	59	45	2406
	Jupiter	E.	97	30	45	2262	95	43	50	2279	93	57	20	2298	92	11	17	2315
16	Sun	W.	50	36	31	2757	52	11	55	2776	53	46	55	2795	55	21	29	2815
	Regulus	E.	41	55	54	2424	40	12	53	2443	38	30	19	2462	36	48	12	2481
	Mars	E.	58	27	42	2502	56	45	53	2520	55	5	8	2540	53	24	51	2559
	Jupiter	E.	83	27	33	2407	81	44	8	2426	80	1	10	2445	78	18	39	2463
17	Sun	W.	63	8	0	2912	64	40	4	2931	66	11	43	2950	67	42	58	2969
	Venus	W.	27	34	10	3002	29	4	20	3020	30	34	8	3038	32	3	34	3055
	Regulus	E.	28	24	19	2577	26	44	53	2596	25	5	53	2615	23	27	19	2635
	Mars	E.	45	10	2	2656	43	32	23	2675	41	55	9	2693	40	18	20	2713
	Jupiter	E.	69	52	36	2556	68	12	41	2575	66	33	12	2593	64	54	7	2612
	Spica ♏	E.	82	22	48	2569	80	43	10	2586	79	3	56	2605	77	25	8	2622
18	Sun	W.	75	13	18	3062	76	42	14	3080	78	10	48	3097	79	39	1	3115
	Venus	W.	39	25	24	3143	40	52	42	3160	42	19	39	3177	43	46	16	3193
	Mars	E.	32	20	25	2803	30	46	1	2820	29	11	59	2837	27	38	19	2854
	Jupiter	E.	56	44	52	2699	55	8	11	2716	53	31	53	2733	51	55	57	2750
	Spica ♏	E.	69	17	3	2709	67	40	35	2726	66	4	29	2742	64	28	45	2757
19	Sun	W.	86	55	2	3195	88	21	17	3210	89	47	14	3225	91	12	53	3239
	Venus	W.	50	54	31	3272	52	19	15	3288	53	43	41	3302	55	7	50	3315
	Pollux	W.	34	20	7	2842	35	53	41	2856	37	26	57	2869	38	59	56	2880
	Jupiter	E.	44	1	34	2828	42	27	42	2842	40	54	8	2857	39	20	54	2870
	Spica ♏	E.	56	35	9	2833	55	1	24	2846	53	27	56	2860	51	54	46	2873
	Saturn	E.	102	26	35	2840	100	52	59	2853	99	19	40	2866	97	46	38	2880
20	Sun	W.	98	17	9	3305	99	41	15	3316	101	5	8	3327	102	28	48	3339
	Venus	W.	62	4	44	3380	63	27	23	3391	64	49	50	3402	66	12	4	3413
	Pollux	W.	46	41	2	2939	48	12	32	2949	49	43	49	2958	51	14	54	2969
	Jupiter	E.	31	39	4	2938	30	7	33	2950	28	36	17	2963	27	5	18	2976
	Spica ♏	E.	44	12	58	2933	42	41	21	2943	41	9	57	2954	39	38	46	2964
	Saturn	E.	90	5	27	2938	88	33	56	2949	87	2	39	2958	85	31	34	2969
21	Sun	W.	109	24	8	3386	110	46	40	3394	112	9	3	3402	113	31	17	3409
	Venus	W.	73	0	25	3459	74	21	35	3467	75	42	36	3475	77	3	28	3481
	Pollux	W.	58	47	25	3010	60	17	25	3018	61	47	16	3025	63	16	58	3031
	Spica ♏	E.	32	5	47	3007	30	35	43	3014	29	5	47	3021	27	36	0	3027
	Saturn	E.	77	59	9	3013	76	29	12	3020	74	59	24	3027	73	29	45	3035
	Antares	E.	78	0	3	3006	76	29	58	3014	75	0	2	3021	73	30	15	3026
22	Sun	W.	120	20	30	3440	121	42	1	3446	123	3	26	3450	124	24	46	3455
	Venus	W.	83	46	6	3509	85	6	20	3514	86	26	29	3517	87	46	34	3521
	Pollux	W.	70	43	43	3056	72	12	47	3061	73	41	45	3064	75	10	39	3067
	Regulus	W.	33	54	49	3059	35	23	49	3063	36	52	44	3065	38	21	36	3068
	Saturn	E.	66	3	32	3064	64	34	38	3069	63	5	50	3073	61	37	7	3078
	Antares	E.	66	3	7	3053	64	34	0	3057	63	4	58	3060	61	36	0	3063
23	Sun	W.	131	10	22	3471	132	31	19	3473	133	52	13	3475	135	13	5	3477
	Venus	W.	94	26	11	3532	95	46	0	3533	97	5	48	3533	98	25	36	3534
	Pollux	W.	82	34	19	3077	84	2	57	3078	85	31	33	3078	87	0	9	3079
	Regulus	W.	45	45	12	3078	47	13	49	3078	48	42	26	3079	50	11	1	3078
	Antares	E.	54	11	59	3074	52	43	17	3075	51	14	37	3076	49	45	58	3076

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Day of the Month.	Star's Name and Position.		Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
23	Saturn	E.	60 8 30	3082	58 39 58	3085	57 11 30	3089	55 43 7	3092
24	Venus	W.	99 45 23	3534	101 5 10	3533	102 24 58	3533	103 44 46	3531
	Regulus	W.	51 39 37	3079	53 8 12	3078	54 36 48	3078	56 5 25	3077
	Mars	W.	32 57 56	3194	34 24 13	3194	35 50 30	3193	37 16 48	3192
	Antares	E.	48 17 19	3076	46 48 40	3076	45 20 1	3075	43 51 21	3074
	Saturn	E.	48 22 6	3105	46 54 3	3109	45 26 4	3111	43 58 8	3114
25	Venus	W.	110 24 15	3520	111 44 17	3518	113 4 21	3515	114 24 29	3511
	Regulus	W.	63 28 56	3067	64 57 46	3065	66 26 39	3061	67 55 36	3058
	Mars	W.	44 28 37	3184	45 55 5	3182	47 21 36	3179	48 48 10	3176
	Jupiter	W.	22 29 32	3089	23 57 55	3083	25 26 26	3077	26 55 4	3070
	Antares	E.	36 27 36	3065	34 58 44	3062	33 29 48	3060	32 0 49	3056
	Saturn	E.	36 39 16	3128	35 11 41	3133	33 44 11	3138	32 16 48	3144
	<i>a</i> Aquilæ	E.	90 14 26	3843	89 0 8	3841	87 45 48	3840	86 31 27	3839
26	Regulus	W.	75 21 23	3039	76 50 47	3035	78 20 17	3031	79 49 52	3026
	Mars	W.	56 1 57	3158	57 28 56	3154	58 56 0	3150	60 23 9	3145
	Jupiter	W.	34 20 0	3043	35 49 19	3038	37 18 44	3033	38 48 16	3026
	Spica $\pi$	W.	21 19 55	3039	22 49 20	3034	24 18 51	3030	25 48 27	3024
	<i>a</i> Aquilæ	E.	80 19 43	3845	79 5 27	3850	77 51 16	3855	76 37 10	3859
27	Mars	W.	67 40 23	3119	69 8 9	3115	70 36 1	3109	72 4 0	3103
	Jupiter	W.	46 17 44	2998	47 48 0	2992	49 18 22	2985	50 48 53	2980
	Spica $\pi$	W.	33 18 4	2998	34 48 20	2993	36 18 42	2986	37 49 12	2981
	<i>a</i> Aquilæ	E.	70 28 22	2903	69 15 5	2916	68 2 1	2930	66 49 11	2945
	Fomalhaut	E.	94 38 14	3249	93 13 3	3242	91 47 44	3237	90 22 19	3231
28	Mars	W.	79 25 45	3072	80 54 29	3065	82 23 21	3058	83 52 22	3051
	Jupiter	W.	58 23 23	2947	59 54 42	2940	61 26 10	2934	62 57 45	2927
	Spica $\pi$	W.	45 23 36	2948	46 54 54	2942	48 26 19	2935	49 57 53	2928
	Fomalhaut	E.	83 13 32	3204	81 47 27	3199	80 21 17	3196	78 55 3	3192
	<i>a</i> Pegasi	E.	105 1 50	3220	103 36 4	3209	102 10 6	3199	100 43 56	3190
29	Mars	W.	91 19 31	3017	92 49 23	3010	94 19 24	3002	95 49 34	2995
	Jupiter	W.	70 37 58	2891	72 10 28	2884	73 43 7	2877	75 15 56	2870
	Spica $\pi$	W.	57 37 56	2893	59 10 24	2886	60 43 1	2878	62 15 48	2870
	Fomalhaut	E.	71 42 46	3176	70 16 8	3175	68 49 29	3173	67 22 48	3172
	<i>a</i> Pegasi	E.	93 30 24	3146	92 3 10	3138	90 35 47	3131	89 8 15	3124
30	Mars	W.	103 22 47	2956	104 53 55	2948	106 25 13	2940	107 56 41	2931
	Jupiter	W.	83 2 26	2831	84 36 13	2823	86 10 11	2815	87 44 20	2807
	Spica $\pi$	W.	70 2 10	2832	71 35 57	2824	73 9 54	2815	74 44 2	2808
	Saturn	W.	25 42 40	2966	27 13 35	2942	28 45 1	2920	30 16 55	2900
	Antares	W.	24 7 49	2832	25 41 35	2824	27 15 32	2815	28 49 40	2808
	Fomalhaut	E.	60 9 25	3179	58 42 51	3183	57 16 21	3188	55 49 57	3194
	<i>a</i> Pegasi	E.	81 48 28	3091	80 20 7	3085	78 51 39	3080	77 23 5	3075
31	Jupiter	W.	95 37 44	2765	97 12 58	2757	98 48 22	2747	100 23 59	2739
	Saturn	W.	38 2 11	2819	39 36 14	2805	41 10 35	2791	42 45 14	2778
	Antares	W.	36 43 1	2765	38 18 15	2757	39 53 40	2747	41 29 18	2738
	Fomalhaut	E.	48 40 18	3247	47 15 4	3263	45 50 9	3282	44 25 37	3305
	<i>a</i> Pegasi	E.	69 58 50	3056	68 29 47	3053	67 0 40	3051	65 31 31	3050

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## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
23	Saturn E.	54 14 48	3095	52 46 32	3098	51 18 20	3101	49 50 11	3104
24	Venus W.	105 4 36	3529	106 24 28	3528	107 44 21	3526	109 4 17	3524
	Regulus W.	57 34 3	3075	59 2 43	3073	60 31 25	3072	62 0 9	3069
	Mars W.	38 43 7	3191	40 9 27	3190	41 35 48	3188	43 2 11	3186
	Antares E.	42 22 40	3073	40 53 57	3071	39 25 12	3069	37 56 25	3068
	Saturn E.	42 30 15	3116	41 2 25	3119	39 34 38	3122	38 6 55	3125
25	Venus W.	115 44 41	3507	117 4 57	3504	118 25 17	3499	119 45 42	3494
	Regulus W.	69 24 37	3056	70 53 41	3052	72 22 50	3048	73 52 4	3043
	Mars W.	50 14 48	3173	51 41 29	3170	53 8 14	3167	54 35 3	3163
	Jupiter W.	28 23 50	3065	29 52 42	3060	31 21 41	3054	32 50 47	3048
	Antares E.	30 31 46	3053	29 2 39	3050	27 33 28	3046	26 4 12	3042
	Saturn E.	30 49 32	3152	29 22 25	3160	27 55 28	3170	26 28 43	3183
	$\alpha$ Aquilæ E.	85 17 5	3838	84 2 42	3840	82 48 21	3841	81 34 1	3843
26	Regulus W.	81 19 33	3021	83 49 20	3015	84 19 14	3010	85 49 14	3005
	Mars W.	61 50 24	3140	63 17 45	3135	64 45 12	3131	66 12 44	3125
	Jupiter W.	40 17 56	3021	41 47 42	3015	43 17 36	3010	44 47 36	3004
	Spica $\gamma$ W.	27 18 10	3020	28 47 58	3014	30 17 54	3009	31 47 56	3004
	$\alpha$ Aquilæ E.	75 23 9	3865	74 9 14	3873	72 55 27	3882	71 41 49	3893
27	Mars W.	73 32 6	3096	75 0 20	3091	76 28 41	3085	77 57 9	3078
	Jupiter W.	52 19 31	2974	53 50 17	2967	55 21 11	2961	56 52 13	2954
	Spica $\gamma$ W.	39 19 49	2974	40 50 34	2968	42 21 27	2962	43 52 28	2956
	$\alpha$ Aquilæ E.	65 36 37	3962	64 24 20	3982	63 12 23	4004	62 0 47	4027
	Fomalhaut E.	88 56 47	3225	87 31 8	3219	86 5 22	3214	84 39 30	3209
28	Mars W.	85 21 31	3045	86 50 48	3038	88 20 14	3031	89 49 48	3024
	Jupiter W.	64 29 30	2920	66 1 24	2913	67 33 26	2906	69 5 37	2898
	Spica $\gamma$ W.	51 29 36	2922	53 1 27	2914	54 33 28	2908	56 5 37	2900
	Fomalhaut E.	77 28 44	3188	76 2 20	3184	74 35 52	3182	73 9 21	3178
	$\alpha$ Pegasi E.	99 17 35	3181	97 51 3	3172	96 24 20	3163	94 57 27	3155
29	Mars W.	97 19 53	2987	98 50 22	2979	100 21 1	2972	101 51 49	2964
	Jupiter W.	76 48 54	2862	78 22 2	2854	79 55 20	2846	81 28 48	2838
	Spica $\gamma$ W.	63 48 45	2863	65 21 51	2856	66 55 7	2847	68 28 34	2840
	Fomalhaut E.	65 56 6	3172	64 29 24	3172	63 2 42	3174	61 36 2	3177
	$\alpha$ Pegasi E.	87 40 34	3117	86 12 45	3110	84 44 48	3103	83 16 42	3096
30	Mars W.	109 28 20	2923	111 0 9	2915	112 32 9	2907	114 4 19	2898
	Jupiter W.	89 18 39	2798	90 53 9	2790	92 27 50	2782	94 2 41	2773
	Spica $\gamma$ W.	76 18 20	2799	77 52 49	2790	79 27 30	2782	81 2 21	2773
	Saturn W.	31 49 14	2882	33 21 56	2864	34 55 1	2848	36 28 26	2833
	Antares W.	30 23 58	2799	31 58 27	2791	33 33 7	2782	35 7 59	2774
	Fomalhaut E.	54 23 40	3201	52 57 32	3209	51 31 33	3220	50 5 48	3233
	$\alpha$ Pegasi E.	75 54 25	3070	74 25 39	3065	72 56 47	3061	71 27 50	3059
31	Jupiter W.	101 59 47	2730	103 35 47	2722	105 11 58	2712	106 48 22	2703
	Saturn W.	44 20 10	2766	45 55 23	2753	47 30 52	2741	49 6 37	2730
	Antares W.	43 5 7	2729	44 41 8	2720	46 17 21	2711	47 53 47	2702
	Fomalhaut E.	43 1 31	3331	41 37 56	3362	40 14 56	3397	38 52 36	3437
	$\alpha$ Pegasi E.	64 2 20	3050	62 33 9	3050	61 3 58	3051	59 34 49	3053

## AT APPARENT NOON.

MEAN  
TIME.THE  
MOON'S

## THE SUN'S

Equation  
of Time,  
to be  
subt. from  
added to  
Apparent  
Time.Diff.  
for  
1 h.Age.  
Meri-  
dian  
Pas-  
sage.

Day of the Week.	Day of the Month.	THE SUN'S					Equation of Time, to be subt. from added to Apparent Time.	Diff. for 1 h.	THE MOON'S	
		Apparent Rt. Ascen.	Diff. for 1 h.	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.			Age.	Meri- dian Pas- sage.
		h m s	s	° ' "	" ' "	" ' "	m s	s	d	h m
Sat.	1	4 34 29.87	10.2	N 22 0 26.6	20.4	15 47.2	2 38.23	0.370	19.2	15 57
Sun.	2	4 38 35.32	10.2	22 8 35.5	19.4	15 47.1	2 29.36	0.386	20.2	16 47
Mo.	3	4 42 41.18	10.3	22 16 21.3	18.4	15 47.0	2 20.09	0.403	21.2	17 35
Tu.	4	4 46 47.43	10.3	22 23 43.8	17.5	15 46.8	2 10.42	0.420	22.2	18 22
We.	5	4 50 54.08	10.3	22 30 43.0	16.5	15 46.7	2 0.35	0.434	23.2	19 10
Th.	6	4 55 1.08	10.3	22 37 18.5	15.5	15 46.6	1 49.93	0.448	24.2	19 58
Fri.	7	4 59 8.43	10.3	22 43 30.4	14.5	15 46.5	1 39.17	0.462	25.2	20 50
Sat.	8	5 3 16.10	10.3	22 49 18.3	13.5	15 46.4	1 28.08	0.474	26.2	21 46
Sun.	9	5 7 24.06	10.3	22 54 42.1	12.5	15 46.3	1 16.71	0.486	27.2	22 46
Mo.	10	5 11 32.32	10.4	22 59 41.8	11.5	15 46.1	1 5.05	0.496	28.2	23 50
Tu.	11	5 15 40.83	10.4	23 4 17.3	10.5	15 46.0	0 53.14	0.506	29.2	0
We.	12	5 19 49.56	10.4	23 8 28.4	9.4	15 45.9	0 41.00	0.513	0.9	0 55
Th.	13	5 23 58.48	10.4	23 12 15.0	8.4	15 45.9	0 28.68	0.521	1.9	1 57
Fri.	14	5 28 7.57	10.4	23 15 37.1	7.4	15 45.8	0 16.18	0.527	2.9	2 54
Sat.	15	5 32 16.81	10.4	23 18 34.5	6.4	15 45.7	0 3.54	0.531	3.9	3 45
Sun.	16	5 36 26.16	10.4	23 21 7.3	5.3	15 45.6	0 9.21	0.535	4.9	4 32
Mo.	17	5 40 35.59	10.4	23 23 15.3	4.3	15 45.6	0 22.06	0.538	5.9	5 15
Tu.	18	5 44 45.09	10.4	23 24 58.5	3.3	15 45.5	0 34.97	0.540	6.9	5 55
We.	19	5 48 54.64	10.4	23 26 16.9	2.2	15 45.5	0 47.93	0.540	7.9	6 35
Th.	20	5 53 4.20	10.4	23 27 10.5	1.2	15 45.4	1 0.90	0.540	8.9	7 14
Fri.	21	5 57 13.75	10.4	23 27 39.3	0.2	15 45.4	1 13.85	0.539	9.9	7 55
Sat.	22	6 1 23.28	10.4	23 27 43.3	0.9	15 45.3	1 26.79	0.537	10.9	8 38
Sun.	23	6 5 32.76	10.4	23 27 22.6	1.9	15 45.3	1 39.68	0.535	11.9	9 25
Mo.	24	6 9 42.17	10.4	23 26 37.0	2.9	15 45.3	1 52.50	0.530	12.9	10 15
Tu.	25	6 13 51.50	10.4	23 25 26.7	4.0	15 45.2	2 5.23	0.526	13.9	11 8
We.	26	6 18 0.72	10.4	23 23 51.8	5.0	15 45.2	2 17.85	0.520	14.9	12 3
Th.	27	6 22 9.81	10.4	23 21 52.3	6.0	15 45.2	2 30.34	0.514	15.9	12 59
Fri.	28	6 26 18.75	10.4	23 19 28.2	7.0	15 45.1	2 42.68	0.507	16.9	13 53
Sat.	29	6 30 27.52	10.4	23 16 39.5	8.1	15 45.1	2 54.86	0.500	17.9	14 44
Sun.	30	6 34 36.11	10.3	23 13 26.4	9.1	15 45.1	3 6.86	0.491	18.9	15 33
Mo.	31	6 38 44.49		N 23 9 48.9		15 45.1	3 18.65		19.9	16 21

## MEAN TIME.

THE MOON'S									
Day of the Week.	Day of the Month.	Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Sat.	1	15 23.0	15 27.7	56 27.3	56 44.3	20 0 27	20 27 42	24 43 58S.	22 57 27S.
Sun.	2	15 32.5	15 37.4	57 1.9	57 20.0	20 54 25	21 20 37	20 52 44	18 31 28
Mo.	3	15 42.5	15 47.6	57 38.6	57 57.3	21 46 20	22 11 37	15 55 25	13 6 27
Tu.	4	15 52.9	15 58.1	58 16.7	58 35.9	22 36 34	23 1 19	10 6 32	6 57 39
We.	5	16 3.2	16 8.2	58 54.8	59 13.0	23 26 0	23 50 46	3 41 53S.	0 21 26S.
Th.	6	16 12.9	16 17.3	59 30.4	59 46.4	0 15 46	0 41 11	3 1 21N.	6 23 55N.
Fri.	7	16 21.1	16 24.4	60 0.4	60 12.4	1 7 10	1 33 52	9 43 30	12 57 5
Sat.	8	16 26.9	16 28.5	60 21.6	60 27.5	2 1 27	2 30 1	16 1 20	18 52 48
Sun.	9	16 29.2	16 28.9	60 30.0	60 28.8	2 59 37	3 30 14	21 27 48	23 42 44
Mo.	10	16 27.5	16 25.1	60 23.9	60 15.1	4 1 49	4 34 10	25 34 11	26 59 13
Tu.	11	16 21.7	16 17.3	60 2.4	59 46.4	5 7 0	5 40 1	27 55 41	28 22 23
We.	12	16 12.1	16 6.3	59 27.4	59 5.9	6 12 50	6 45 5	28 19 14	27 47 18
Th.	13	15 59.8	15 53.0	58 42.3	58 17.3	7 16 29	7 46 48	26 48 32	25 25 38
Fri.	14	15 46.0	15 38.8	57 51.4	57 25.2	8 15 54	8 43 43	23 41 44	21 40 2
Sat.	15	15 31.7	15 24.9	56 59.1	56 34.0	9 10 18	9 35 43	19 23 44	16 55 48
Sun.	16	15 18.3	15 12.3	56 10.1	55 47.7	10 0 4	10 23 31	14 18 53	11 35 18
Mo.	17	15 6.7	15 1.7	55 27.2	55 8.9	10 46 11	11 8 15	8 47 5	5 55 59
Tu.	18	14 57.3	14 53.6	54 52.9	54 39.3	11 29 51	11 51 7	3 3 31N.	0 11 5N.
We.	19	14 50.6	14 48.3	54 28.3	54 19.8	12 12 14	12 33 19	2 40 10S.	5 29 2S.
Th.	20	14 46.6	14 45.6	54 13.7	54 10.1	12 54 30	13 15 56	8 14 23	10 55 5
Fri.	21	14 45.3	14 45.6	54 8.7	54 9.9	13 37 43	13 59 59	13 29 58	15 57 41
Sat.	22	14 46.4	14 47.9	54 13.0	54 18.2	14 22 51	14 46 23	18 16 53	20 26 1
Sun.	23	14 49.8	14 52.1	54 25.2	54 33.8	15 10 41	15 35 46	22 23 27	24 7 27
Mo.	24	14 54.9	14 58.0	54 43.9	54 55.3	16 1 40	16 28 21	25 36 10	26 47 48
Tu.	25	15 1.4	15 5.0	55 7.9	55 21.2	16 55 45	17 23 44	27 40 37	28 13 6
We.	26	15 8.9	15 13.0	55 35.4	55 50.3	17 52 10	18 20 51	28 24 0	28 12 29
Th.	27	15 17.1	15 21.4	56 5.4	56 21.1	18 49 35	19 18 10	27 38 15	26 41 27
Fri.	28	15 25.6	15 29.7	56 36.6	56 51.9	19 46 26	20 14 16	25 22 46	23 43 20
Sat.	29	15 33.9	15 38.0	57 7.3	57 22.1	20 41 32	21 8 14	21 44 40	19 28 33
Sun.	30	15 42.0	15 45.8	57 36.7	57 50.8	21 34 21	21 59 56	16 56 57S.	14 11 57S.
Mo.	31	15 49.5	15 53.0	58 4.4	58 17.4				

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° / //		° / //		° / //		° / //	
1	Jupiter W.	108 24 58	2694	110 1 46	2685	111 38 46	2675	113 16 0	2666
	Saturn W.	50 42 37	2717	52 18 54	2706	53 55 26	2695	55 32 13	2683
	Antares W.	49 30 25	2692	51 7 16	2682	52 44 20	2673	54 21 36	2663
	Fomalhaut E.	37 31 1	13483	36 10 18	3538	34 50 36	3602	33 32 4	3676
	a Pegasi E.	58 5 42	3056	56 36 39	3060	55 7 41	3066	53 38 50	3073
	Sun E.	132 56 8	3057	131 27 6	3045	129 57 49	3033	128 28 17	3022
2	Saturn W.	63 40 2	2626	65 18 22	2615	66 56 57	2603	68 35 48	2591
	Antares W.	62 31 21	2612	64 9 59	2602	65 48 52	2591	67 27 59	2580
	a Pegasi E.	46 17 24	3137	44 49 59	3158	43 22 59	3183	41 56 29	3211
	a Arietis E.	85 51 49	2640	84 13 48	2629	82 35 33	2618	80 57 3	2609
	Sun E.	120 57 2	2963	119 26 3	2951	117 54 49	2939	116 23 20	2927
3	Saturn W.	76 54 0	2534	78 34 26	2522	80 15 8	2511	81 56 6	2500
	Antares W.	75 47 19	2525	77 27 57	2514	79 8 50	2502	80 50 0	2492
	a Arietis E.	72 41 2	2556	71 1 6	2545	69 20 56	2534	67 40 30	2524
	Sun E.	108 42 3	2866	107 9 0	2854	105 35 42	2841	104 2 7	2828
4	Saturn W.	90 25 1	2441	92 7 37	2429	93 50 30	2418	95 33 39	2407
	Antares W.	89 19 47	2434	91 2 34	2422	92 45 38	2410	94 28 59	2398
	a Arietis E.	59 14 42	2471	57 32 48	2461	55 50 40	2450	54 8 17	2440
	Sun E.	96 10 10	2766	94 34 57	2753	92 59 28	2740	91 23 41	2728
5	Saturn W.	104 13 30	2350	105 58 17	2339	107 43 19	2328	109 28 37	2317
	a Aquilæ W.	56 54 52	3536	58 14 36	3470	59 35 34	3417	60 57 31	3369
	a Arietis E.	45 32 59	2395	43 49 17	2387	42 5 24	2380	40 21 20	2373
	Sun E.	83 20 37	2665	81 43 10	2652	80 5 26	2640	78 27 26	2629
6	a Aquilæ W.	68 0 9	3169	69 26 55	3138	70 54 19	3107	72 22 20	3080
	Fomalhaut W.	39 24 12	2916	40 56 11	2859	42 29 22	2808	44 3 40	2761
	a Arietis E.	31 39 4	2356	29 54 26	2357	28 9 50	2362	26 25 20	2370
	Sun E.	70 13 24	2571	68 33 48	2560	66 53 58	2549	65 13 53	2539
7	a Aquilæ W.	79 50 3	2971	81 20 52	2955	82 52 1	2940	84 23 29	2928
	Fomalhaut W.	52 8 51	2583	53 48 9	2556	55 28 5	2531	57 8 35	2509
	a Pegasi W.	32 11 11	3178	33 37 47	3076	35 6 26	2989	36 36 53	2912
	Sun E.	56 50 2	2492	55 8 38	2484	53 27 3	2477	51 45 18	2470
8	a Aquilæ W.	92 4 4	2890	93 36 35	2889	95 9 8	2889	96 41 41	2891
	Fomalhaut W.	65 38 12	2420	67 21 18	2407	69 4 43	2396	70 48 24	2385
	a Pegasi W.	44 30 10	2644	46 8 5	2607	47 46 50	2575	49 26 20	2546
	Sun E.	43 14 20	2445	41 31 49	2442	39 49 14	2440	38 6 36	2439
13	Sun W.	25 41 29	2747	27 17 7	2755	28 52 34	2766	30 27 47	2777
	Regulus E.	40 41 37	2357	38 57 0	2373	37 12 46	2389	35 28 55	2405
	Mars E.	66 50 20	2490	65 8 52	2506	63 27 47	2523	61 47 6	2540
	Jupiter E.	81 44 16	2366	79 59 53	2382	78 15 53	2398	76 32 16	2415
14	Sun W.	38 19 45	2848	39 53 11	2863	41 26 18	2879	42 59 4	2896
	Mars E.	53 29 38	2629	51 51 22	2646	50 13 30	2664	48 26 2	2683
	Jupiter E.	68 0 12	2501	66 19 0	2519	64 38 13	2536	62 57 50	2554
	Spica ♀ E.	80 54 56	2487	79 13 24	2503	77 32 15	2520	75 51 30	2538
15	Sun W.	50 37 31	2981	52 8 7	2998	53 38 22	3016	55 8 15	3033
	Mars E.	40 34 48	2773	38 59 45	2791	37 25 6	2809	35 50 50	2827

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month	Star's Name and Position.		Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
1	Jupiter	W.	114 53 26	2656	116 31 5	2646	118 8 57	2637	119 47 2	2627
	Saturn	W.	57 9 16	2671	58 46 35	2660	60 24 8	2649	62 1 57	2637
	Antares	W.	55 59 6	2653	57 36 49	2643	59 14 46	2633	60 52 56	2629
	Fomalhaut	E.	32 14 51	3762	30 59 9	3864	29 45 13	3983	28 33 17	4127
	a Pegasi	E.	52 10 7	3081	50 41 34	3092	49 13 15	3105	47 45 11	3119
	Sun	E.	126 58 31	3010	125 28 31	2998	123 58 16	2986	122 27 46	2975
2	Saturn	W.	70 14 55	2580	71 54 18	2569	73 33 56	2557	75 13 50	2546
	Antares	W.	69 7 21	2569	70 46 58	2559	72 26 50	2548	74 6 57	2537
	a Pegasi	E.	40 30 33	3244	39 5 16	3283	37 40 45	3330	36 17 8	3384
	a Arietis	E.	79 18 20	2598	77 39 22	2588	76 0 10	2577	74 20 43	2567
	Sun	E.	114 51 35	2915	113 19 35	2903	111 47 20	2891	110 14 49	2879
3	Saturn	W.	83 37 20	2487	85 18 51	2476	87 0 38	2465	88 42 41	2453
	Antares	W.	82 31 25	2480	84 13 6	2469	85 55 3	2457	87 37 17	2445
	a Arietis	E.	65 59 50	2513	64 18 55	2503	62 37 46	2492	60 56 21	2482
	Sun	E.	102 28 16	2816	100 54 9	2804	99 19 46	2791	97 45 7	2778
4	Saturn	W.	97 17 4	2395	99 0 46	2384	100 44 44	2372	102 28 59	2361
	Antares	W.	96 12 36	2387	97 56 30	2375	99 40 41	2363	101 25 9	2351
	a Arietis	E.	52 25 40	2431	50 42 50	2422	48 59 46	2412	47 16 29	2403
	Sun	E.	89 47 38	2715	88 11 18	2702	86 34 41	2689	84 57 47	2677
5	Saturn	W.	111 14 11	2307	113 0 0	2297	114 46 4	2287	116 32 23	2277
	a Aquilæ	W.	62 20 23	3322	63 44 9	3281	65 8 43	3241	66 34 4	3203
	a Arietis	E.	38 37 6	2368	36 52 45	2362	35 8 16	2358	33 23 41	2357
	Sun	E.	76 49 10	2616	75 10 37	2604	73 31 48	2593	71 52 44	2582
6	a Aquilæ	W.	73 50 54	3054	75 20 0	3031	76 49 35	3010	78 19 36	2989
	Fomalhaut	W.	45 38 59	2719	47 15 14	2681	48 52 20	2646	50 30 13	2613
	a Arietis	E.	24 41 2	2382	22 57 1	2401	21 13 27	2427	19 30 30	2464
	Sun	E.	63 33 34	2529	61 53 1	2519	60 12 14	2509	58 31 14	2501
7	a Aquilæ	W.	85 55 12	2916	87 27 10	2908	88 59 19	2900	90 31 38	2894
	Fomalhaut	W.	58 49 36	2487	60 31 7	2468	62 13 5	2451	63 55 27	2435
	a Pegasi	W.	38 8 57	2845	39 42 27	2786	41 17 14	2733	42 53 10	2685
	Sun	E.	50 3 23	2463	48 21 18	2458	46 39 6	2453	44 56 46	2448
8	a Aquilæ	W.	98 14 12	2894	99 46 38	2900	101 18 57	2909	102 51 5	2919
	Fomalhaut	W.	72 32 20	2375	74 16 30	2368	76 0 51	2361	77 45 22	2355
	a Pegasi	W.	51 6 30	2519	52 47 17	2496	54 28 36	2475	56 10 24	2457
	Sun	E.	36 23 57	2439	34 41 18	2440	32 58 41	2443	31 16 8	2447
13	Sun	W.	32 2 45	2789	33 37 27	2802	35 11 52	2817	36 45 58	2832
	Regulus	E.	33 45 28	2422	32 2 25	2440	30 19 47	2458	28 37 34	2475
	Mars	E.	60 6 48	2557	58 26 54	2575	56 47 24	2593	55 8 19	2610
	Jupiter	E.	74 49 3	2432	73 6 14	2449	71 23 49	2466	69 41 48	2484
14	Sun	W.	44 31 28	2913	46 3 31	2929	47 35 13	2946	49 6 33	2964
	Mars	E.	46 58 59	2701	45 22 20	2719	43 46 5	2737	42 10 14	2756
	Jupiter	E.	61 17 52	2572	59 38 18	2590	57 59 9	2607	56 20 24	2625
	Spica $\gamma$	E.	74 11 9	2556	72 31 13	2572	70 51 40	2590	69 12 31	2607
15	Sun	W.	56 37 47	3050	58 6 58	3067	59 35 48	3084	61 4 17	3101
	Mars	E.	34 16 57	2845	32 43 27	2863	31 10 20	2880	29 37 35	2896

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P. L. of Diff.	IIIh.	P. L. of Diff.	VIh.	P. L. of Diff.	IXh.	P. L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
15	Jupiter	E.	54 42 3	2643	53 4 6	2661	51 26 33	2678	49 49 23	2696
	Spica ♀	E.	67 33 45	2624	65 55 23	2641	64 17 24	2658	62 39 48	2675
	Saturn	E.	111 26 26	2636	109 48 20	2653	108 10 37	2669	106 33 16	2685
16	Sun	W.	62 32 26	3117	64 0 15	3134	65 27 44	3149	66 54 54	3165
	Venus	W.	21 8 36	3168	22 35 23	3184	24 1 51	3200	25 28 0	3216
	Mars	E.	28 5 11	2913	26 33 9	2931	25 1 29	2947	23 30 9	2962
	Jupiter	E.	41 49 22	2780	40 14 28	2798	38 39 57	2814	37 5 47	2831
	Spica ♀	E.	54 37 22	2756	53 1 56	2772	51 26 51	2787	49 52 6	2802
	Saturn	E.	98 31 49	2764	96 56 34	2779	95 21 39	2795	93 47 4	2809
17	Sun	W.	74 6 8	3240	75 31 30	3253	76 56 37	3267	78 21 27	3279
	Venus	W.	32 34 14	3289	33 58 38	3304	35 22 45	3317	36 46 37	3329
	Jupiter	E.	29 20 12	2911	27 48 7	2926	26 16 21	2943	24 44 56	2959
	Spica ♀	E.	42 3 7	2873	40 30 13	2885	38 57 35	2898	37 25 14	2910
	Saturn	E.	85 58 50	2880	84 26 5	2892	82 53 36	2905	81 21 23	2918
	Antares	E.	87 57 25	2872	86 24 30	2885	84 51 52	2898	83 19 30	2909
18	Sun	W.	85 22 2	3339	86 45 29	3348	88 8 45	3359	89 31 48	3368
	Venus	W.	43 42 23	3388	45 4 53	3399	46 27 11	3409	47 49 17	3418
	Regulus	W.	24 16 54	2972	25 47 42	2981	27 18 19	2989	28 48 45	2998
	Spica ♀	E.	29 47 9	2966	28 16 13	2975	26 45 29	2984	25 14 56	2994
	Saturn	E.	73 44 8	2974	72 13 23	2984	70 42 50	2994	69 12 30	3004
	Antares	E.	75 41 20	2964	74 10 22	2974	72 39 37	2984	71 9 4	2992
19	Sun	W.	96 24 35	3409	97 46 41	3415	99 3 41	3422	100 30 33	3427
	Venus	W.	54 37 21	3457	55 58 33	3464	57 19 37	3471	58 40 34	3476
	Regulus	W.	36 18 31	3033	37 48 3	3039	39 17 28	3044	40 46 46	3048
	Saturn	E.	61 43 38	3045	60 14 21	3052	58 45 13	3060	57 16 14	3066
	Antares	E.	63 38 48	3029	62 9 11	3035	60 39 42	3041	59 10 20	3045
20	Sun	W.	107 18 30	3447	108 39 53	3451	110 1 12	3454	111 22 28	3455
	Venus	W.	65 24 1	3495	66 44 31	3498	68 4 58	3500	69 25 22	3500
	Regulus	W.	48 11 59	3067	49 40 49	3069	51 9 37	3071	52 38 22	3072
	Mars	W.	18 56 9	3243	20 21 27	3245	21 46 43	3246	23 11 58	3248
	Saturn	E.	49 53 11	3094	48 24 54	3100	46 56 44	3104	45 28 39	3109
	Antares	E.	51 44 51	3065	50 15 58	3066	48 47 7	3069	47 18 19	3070
21	Sun	W.	118 8 30	3458	119 29 41	3457	120 50 53	3455	122 12 7	3454
	Venus	W.	76 7 14	3501	77 27 37	3499	78 48 2	3498	80 8 29	3496
	Regulus	W.	60 1 57	3073	61 30 40	3071	62 59 25	3069	64 28 12	3068
	Mars	W.	30 17 59	3248	31 43 12	3246	33 8 27	3245	34 33 43	3242
	Jupiter	W.	18 55 40	3142	20 22 59	3134	21 50 28	3126	23 18 6	3120
	Saturn	E.	38 9 35	3131	36 42 3	3136	35 14 37	3141	33 47 17	3147
	Antares	E.	39 54 34	3071	38 25 49	3069	36 57 2	3068	35 28 13	3066
	α Aquilæ	E.	93 13 42	3842	91 59 23	3841	90 45 3	3838	89 30 40	3836
22	Sun	W.	128 58 46	3442	130 20 15	3438	131 41 49	3435	133 3 26	3431
	Venus	W.	86 51 31	3477	88 12 21	3472	89 33 16	3468	90 54 16	3463
	Regulus	W.	71 52 53	3052	73 22 1	3048	74 51 14	3043	76 20 33	3038
	Mars	W.	41 40 50	3227	43 6 27	3223	44 32 9	3219	45 57 56	3214
	Jupiter	W.	30 38 4	3091	32 6 25	3086	33 34 52	3079	35 3 27	3073
	Antares	E.	28 3 25	3051	26 34 16	3047	25 5 1	3043	23 35 41	3038

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
			° ' "		° ' "		° ' "		° ' "	
15	Jupiter	E.	48 12 37	2713	46 36 14	2730	45 0 14	2747	43 24 37	2764
	Spica $\pi$	E.	61 2 35	2692	59 25 44	2708	57 49 15	2725	56 13 8	2741
	Saturn	E.	104 56 16	2701	103 19 38	2717	101 43 21	2733	100 7 25	2748
16	Sun	W.	68 21 45	3181	69 48 17	3195	71 14 32	3211	72 40 28	3225
	Venus	W.	26 53 50	3231	28 19 22	3246	29 44 37	3261	31 9 34	3276
	Mars	E.	21 59 9	2979	20 28 30	2995	18 58 11	3011	17 28 12	3026
	Jupiter	E.	35 31 59	2846	33 58 31	2863	32 25 24	2879	30 52 38	2894
	Spica $\pi$	E.	48 17 41	2817	46 43 35	2832	45 9 48	2845	43 36 19	2859
	Saturn	E.	92 12 48	2824	90 38 51	2838	89 5 13	2852	87 31 53	2866
17	Sun	W.	79 46 3	3292	81 10 24	3305	82 34 30	3316	83 58 23	3328
	Venus	W.	38 10 15	3342	39 33 38	3355	40 56 46	3366	42 19 41	3378
	Jupiter	E.	23 13 52	2976	21 43 9	2993	20 12 48	3012	18 42 50	3032
	Spica $\pi$	E.	35 53 8	2922	34 21 17	2933	32 49 40	2945	31 18 18	2955
	Saturn	E.	79 49 27	2930	78 17 46	2941	76 46 19	2952	75 15 6	2964
	Antares	E.	81 47 23	2921	80 15 31	2933	78 43 54	2943	77 12 30	2954
18	Sun	W.	90 54 41	3377	92 17 24	3386	93 39 56	3394	95 2 20	3401
	Venus	W.	49 11 13	3427	50 32 59	3436	51 54 35	3444	53 16 2	3451
	Regulus	W.	30 19 0	3006	31 49 6	3013	33 19 3	3020	34 48 51	3026
	Spica $\pi$	E.	23 44 36	3002	22 14 25	3010	20 44 25	3018	19 14 34	3025
	Saturn	E.	67 42 22	3013	66 12 25	3022	64 42 39	3031	63 13 4	3038
	Antares	E.	69 38 41	3000	68 8 28	3009	66 38 26	3016	65 8 33	3022
19	Sun	W.	101 52 19	3432	103 13 59	3437	104 35 34	3441	105 57 4	3445
	Venus	W.	60 1 25	3480	61 22 11	3485	62 42 52	3489	64 3 29	3493
	Regulus	W.	42 15 59	3053	43 45 6	3057	45 14 8	3061	46 43 5	3064
	Saturn	E.	55 47 23	3072	54 18 39	3078	52 50 3	3084	51 21 34	3089
	Antares	E.	57 41 3	3051	56 11 53	3055	54 42 48	3058	53 13 47	3062
20	Sun	W.	112 43 43	3456	114 4 56	3458	115 26 7	3457	116 47 19	3458
	Venus	W.	70 45 46	3502	72 6 8	3502	73 26 30	3502	74 46 52	3502
	Regulus	W.	54 7 6	3073	55 35 49	3073	57 4 32	3073	58 33 14	3073
	Mars	W.	24 37 11	3248	26 2 23	3248	27 27 35	3248	28 52 47	3248
	Saturn	E.	44 0 40	3113	42 32 46	3117	41 4 57	3121	39 37 13	3126
	Antares	E.	45 49 33	3071	44 20 48	3071	42 52 3	3072	41 23 19	3071
21	Sun	W.	123 33 22	3453	124 54 39	3451	126 15 58	3447	127 37 21	3446
	Venus	W.	81 28 58	3492	82 49 31	3489	84 10 7	3486	85 30 47	3482
	Regulus	W.	65 57 1	3065	67 25 53	3062	68 54 49	3059	70 23 49	3056
	Mars	W.	35 59 2	3240	37 24 24	3237	38 49 49	3235	40 15 17	3231
	Jupiter	W.	24 45 51	3114	26 13 44	3108	27 41 44	3103	29 9 50	3096
	Saturn	E.	32 20 4	3154	30 53 0	3162	29 26 5	3170	27 59 20	3180
	Antares	E.	33 59 22	3064	32 30 28	3061	31 1 31	3058	29 32 30	3055
	$\alpha$ Aquilæ	E.	88 16 15	3835	87 1 49	3834	85 47 22	3834	84 32 55	3835
22	Sun	W.	134 25 8	3427	135 46 54	3422	137 8 46	3418	138 30 42	3413
	Venus	W.	92 15 22	3457	93 36 34	3450	94 57 54	3444	96 19 21	3437
	Regulus	W.	77 49 58	3033	79 19 30	3028	80 49 8	3022	82 18 54	3016
	Mars	W.	47 23 49	3208	48 49 49	3203	50 15 55	3197	51 42 8	3190
	Jupiter	W.	36 32 10	3067	38 1 0	3060	39 29 58	3054	40 59 4	3048
	Antares	E.	22 6 15	3033	20 36 43	3027	19 7 4	3022	17 37 18	3016

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.			P.L. of Diff.			IIIh.			P.L. of Diff.			VIh.			P.L. of Diff.			IXh.			P.L. of Diff.		
			°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
22	<i>a</i> Aquilæ	E.	83	16	29	3835			82	4	3	3837			80	49	39	3839			79	35	17	3842		
23	Venus	W.	97	40	56	3430			99	2	39	3423			100	24	30	3415			101	46	30	3408		
	Mars	W.	53	8	29	3184			54	34	57	3178			56	1	33	3170			57	28	17	3163		
	Jupiter	W.	42	28	18	3040			43	57	41	3033			45	27	13	3026			46	56	54	3018		
	Spica $\eta$	W.	29	47	43	3009			31	17	45	3003			32	47	54	2996			34	18	12	2989		
	<i>a</i> Aquilæ	E.	73	24	26	3868			72	10	34	3875			70	56	49	3885			69	43	14	3896		
	Fomalhaut	E.	97	54	43	3269			96	29	55	3261			95	4	58	3253			93	39	52	3246		
24	Venus	W.	108	38	49	3364			110	1	47	3354			111	24	56	3344			112	48	16	3336		
	Mars	W.	64	44	15	3124			66	11	55	3115			67	39	46	3107			69	7	47	3098		
	Jupiter	W.	54	27	43	2978			55	58	24	2970			57	29	15	2961			59	0	17	2952		
	Spica $\eta$	W.	41	52	2	2950			43	23	17	2942			44	54	43	2933			46	26	20	2924		
	<i>a</i> Aquilæ	E.	63	38	26	3970			62	26	17	3991			61	14	28	4014			60	3	2	4039		
	Fomalhaut	E.	86	32	4	3208			85	6	4	3300			83	39	55	3194			82	13	39	3187		
25	Mars	W.	76	30	38	3052			77	59	46	3043			79	29	6	3033			80	58	38	3024		
	Jupiter	W.	66	38	16	2906			68	10	27	2897			69	42	50	2887			71	15	25	2878		
	Spica $\eta$	W.	54	7	13	2880			55	39	58	2870			57	12	55	2860			58	46	5	2852		
	Fomalhaut	E.	75	0	23	3158			73	33	23	3153			72	6	18	3149			70	39	8	3145		
	<i>a</i> Pegasi	E.	96	49	47	3129			95	22	12	3119			93	54	25	3109			92	26	26	3098		
26	Mars	W.	88	29	19	2974			90	0	4	2964			91	31	2	2954			93	2	12	2945		
	Jupiter	W.	79	1	24	2830			80	35	13	2820			82	9	15	2811			83	43	29	2801		
	Spica $\eta$	W.	66	34	57	2803			68	9	21	2793			69	43	58	2783			71	18	48	2774		
	Saturn	W.	24	9	37	2960			25	40	40	2931			27	12	19	2905			28	44	31	2882		
	Antares	W.	20	40	31	2804			22	14	54	2793			23	49	31	2784			25	24	20	2774		
	Fomalhaut	E.	63	22	21	3134			61	54	53	3135			60	27	26	3137			59	0	1	3139		
	<i>a</i> Pegasi	E.	85	3	28	3052			83	34	19	3043			82	5	0	3036			80	35	32	3029		
27	Mars	W.	100	41	8	2895			102	13	33	2886			103	46	10	2876			105	19	0	2866		
	Jupiter	W.	91	37	48	2753			93	13	17	2744			94	48	59	2734			96	24	54	2725		
	Spica $\eta$	W.	79	16	5	2726			80	52	10	2716			82	28	29	2707			84	5	0	2697		
	Saturn	W.	36	32	14	2790			38	6	55	2775			39	41	56	2760			41	17	17	2746		
	Antares	W.	33	21	37	2726			34	57	42	2716			36	34	1	2707			38	10	32	2697		
	Fomalhaut	E.	51	44	9	3171			50	17	25	3183			48	50	55	3197			47	24	42	3214		
	<i>a</i> Pegasi	E.	73	6	5	2998			71	35	50	2993			70	5	29	2989			68	35	3	2987		
28	Jupiter	W.	104	27	32	2679			106	4	40	2670			107	42	0	2661			109	19	32	2653		
	Saturn	W.	49	18	23	2684			50	55	25	2672			52	32	43	2661			54	10	15	2650		
	Antares	W.	46	16	17	2650			47	54	4	2641			49	32	3	2632			51	10	14	2623		
	Fomalhaut	E.	40	19	52	3351			38	56	40	3393			37	34	16	3443			36	12	48	3500		
	<i>a</i> Pegasi	E.	61	2	14	2983			59	31	40	2985			58	1	8	2988			56	30	40	2993		
29	Saturn	W.	62	21	30	2599			64	0	26	2590			65	39	35	2581			67	18	56	2572		
	Antares	W.	59	24	10	2580			61	3	33	2571			62	43	8	2562			64	22	55	2554		
	<i>a</i> Pegasi	E.	49	0	30	3042			47	31	9	3059			46	2	9	3078			44	33	33	3102		
	<i>a</i> Arietis	E.	88	56	46	2606			87	17	59	2597			85	38	59	2589			83	59	49	2580		
30	Saturn	W.	75	38	49	2528			77	19	23	2520			79	0	9	2512			80	41	6	2504		
	Antares	W.	72	44	38	2514			74	25	32	2505			76	6	38	2497			77	47	55	2489		
	<i>a</i> Pegasi	E.	37	19	17	3288			35	54	52	3345			34	31	33	3414			33	9	33	3494		
	<i>a</i> Arietis	E.	75	41	9	2541			74	0	53	2534			72	20	27	2526			70	39	50	2519		
	Sun	E.	137	29	31	2866			135	56	29	2856			134	23	14	2845			132	49	45	2836		

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		o / //		o / //		o / //		o / //	
22	$\alpha$ Aquilæ E.	78 20 58	3846	77 6 43	3850	75 52 32	3855	74 38 26	3860
23	Venus W.	103 8 38	3399	104 30 56	3390	105 53 24	3381	107 16 2	3373
	Mars W.	58 55 10	3156	60 22 12	3148	61 49 23	3140	63 16 44	3132
	Jupiter W.	48 26 44	3010	49 56 44	3002	51 26 54	2995	52 57 13	2986
	Spica $\mathfrak{M}$ W.	35 48 39	2981	37 19 15	2974	38 50 1	2966	40 20 56	2958
	$\alpha$ Aquilæ E.	68 29 50	3907	67 16 37	3920	66 3 38	3935	64 50 54	3951
	Fomalhaut E.	92 14 37	3237	90 49 12	3230	89 23 38	3222	87 57 55	3215
24	Venus W.	114 11 46	3326	115 35 28	3315	116 59 22	3306	118 23 27	3296
	Mars W.	70 35 59	3089	72 4 22	3080	73 32 56	3071	75 1 41	3061
	Jupiter W.	60 31 30	2943	62 2 54	2934	63 34 30	2925	65 6 17	2916
	Spica $\mathfrak{M}$ W.	47 58 8	2916	49 30 7	2906	51 2 18	2898	52 34 39	2888
	$\alpha$ Aquilæ E.	58 52 1	4067	57 41 27	4099	56 31 24	4133	55 21 54	4171
	Fomalhaut E.	80 47 14	3181	79 20 42	3174	77 54 2	3169	76 27 16	3163
25	Mars W.	82 28 21	3014	83 58 17	3003	85 28 26	2994	86 58 46	2984
	Jupiter W.	72 48 12	2869	74 21 11	2859	75 54 23	2849	77 27 47	2839
	Spica $\mathfrak{M}$ W.	60 19 26	2842	61 53 0	2832	63 26 47	2822	65 0 46	2813
	Fomalhaut E.	69 11 53	3142	67 44 34	3139	66 17 12	3137	64 49 47	3136
	$\alpha$ Pegasi E.	90 58 14	3087	89 29 49	3078	88 1 13	3069	86 32 26	3061
26	Mars W.	94 33 34	2935	96 5 9	2925	97 36 56	2915	99 8 56	2905
	Jupiter W.	85 17 56	2791	86 52 35	2782	88 27 26	2772	90 2 31	2763
	Spica $\mathfrak{M}$ W.	72 53 50	2764	74 29 5	2755	76 4 32	2745	77 40 13	2735
	Saturn W.	30 17 13	2861	31 50 22	2841	33 23 56	2823	34 57 54	2806
	Antares W.	26 59 22	2764	28 34 37	2755	30 10 4	2745	31 45 44	2735
	Fomalhaut E.	57 32 39	3142	56 5 20	3148	54 38 8	3154	53 11 4	3162
	$\alpha$ Pegasi E.	79 5 55	3022	77 36 9	3015	76 6 15	3009	74 36 13	3004
27	Mars W.	106 52 3	2857	108 25 17	2847	109 58 44	2838	111 32 23	2828
	Jupiter W.	98 1 1	2716	99 37 20	2706	101 13 52	2697	102 50 36	2688
	Spica $\mathfrak{M}$ W.	85 41 44	2687	87 16 41	2679	88 55 49	2669	90 33 11	2660
	Saturn W.	42 52 56	2732	44 28 53	2719	46 5 7	2707	47 41 37	2696
	Antares W.	39 47 16	2687	41 24 13	2678	43 1 22	2669	44 38 43	2660
	Fomalhaut E.	45 58 49	3234	44 33 20	3256	43 8 17	3283	41 43 46	3315
	$\alpha$ Pegasi E.	67 4 34	2984	65 34 1	2982	64 3 26	2981	62 32 50	2981
28	Jupiter W.	110 57 15	2643	112 35 11	2635	114 13 18	2627	115 51 36	2618
	Saturn W.	55 48 2	2640	57 26 3	2629	59 4 18	2619	60 42 47	2609
	Antares W.	52 48 37	2615	54 27 12	2605	56 6 0	2597	57 44 59	2588
	Fomalhaut E.	34 52 24	3567	33 33 14	3646	32 15 29	3738	30 59 22	3846
	$\alpha$ Pegasi E.	55 0 18	2999	53 30 4	3007	52 0 0	3016	50 30 7	3029
29	Saturn W.	68 58 30	2563	70 38 16	2553	72 18 15	2545	73 58 26	2536
	Antares W.	66 2 53	2546	67 43 2	2538	69 23 23	2530	71 3 55	2522
	$\alpha$ Pegasi E.	43 5 26	3128	41 37 51	3159	40 10 53	3197	38 44 40	3239
	$\alpha$ Arietis E.	82 20 27	2572	80 40 54	2564	79 1 10	2556	77 21 15	2548
30	Saturn W.	82 22 14	2495	84 3 34	2488	85 45 4	2480	87 26 45	2472
	Antares W.	79 29 23	2482	81 11 1	2475	82 52 50	2467	84 34 50	2460
	$\alpha$ Pegasi E.	31 49 2	3588	30 30 14	3698	29 13 25	3829	27 58 53	3986
	$\alpha$ Arietis E.	68 59 3	2512	67 18 7	2505	65 37 1	2498	63 55 45	2492
	Sun E.	131 16 4	2826	129 42 10	2817	128 8 4	2808	126 33 46	2798

## AT APPARENT NOON.

MEAN  
TIME.THE  
MOON'S

Day of the Week.	Day of the Month.	THE SUN'S										Equation of Time, to be added to Apparent Time.		Diff. for 1 h.	THE MOON'S	
		Apparent Rt. Ascen.		Diff. for 1 h.	Apparent Declination.		Diff. for 1 h.	Semidi- ameter.	m s	s	Age.	Meri- dian Pas- sage.				
		h m s	s		° ' "	" ' "										
Mo.	1	6 38 44	49	10.3	N 23	9 48	9	10.1	15 45	1	3 18	65	0.483	19.9	16 21	
Tu.	2	6 42 52	65	10.3	23	5 47	0	11.1	15 45	1	3 30	22	0.472	20.9	17 7	
We.	3	6 47 0	56	10.3	23	1 21	0	12.1	15 45	1	3 41	55	0.461	21.9	17 54	
Th.	4	6 51 8	22	10.3	22 56	30	8	13.1	15 45	1	3 52	62	0.449	22.9	18 43	
Fri.	5	6 55 15	58	10.3	22 51	16	4	14.1	15 45	1	4 3	40	0.437	23.9	19 36	
Sat.	6	6 59 22	64	10.3	22 45	38	2	15.1	15 45	1	4 13	88	0.424	24.9	20 33	
Sun.	7	7 3 29	40	10.3	22 39	36	2	16.1	15 45	1	4 24	05	0.409	25.9	21 34	
Mo.	8	7 7 35	80	10.3	22 33	10	5	17.1	15 45	1	4 33	87	0.393	26.9	22 37	
Tu.	9	7 11 41	83	10.2	22 26	21	3	18.0	15 45	1	4 43	30	0.377	27.9	23 40	
We.	10	7 15 47	48	10.2	22 19	8	9	19.0	15 45	2	4 52	36	0.360	28.9	♂	
Th.	11	7 19 52	71	10.2	22 11	33	4	19.9	15 45	2	5 1	00	0.342	0.5	0 39	
Fri.	12	7 23 57	50	10.2	22 3	34	8	20.9	15 45	3	5 9	21	0.323	1.5	1 34	
Sat.	13	7 28 1	84	10.2	21 55	13	5	21.8	15 45	3	5 16	97	0.303	2.5	2 23	
Sun.	14	7 32 5	69	10.1	21 46	29	7	22.8	15 45	3	5 24	25	0.283	3.5	3 8	
Mo.	15	7 36 9	05	10.1	21 37	23	5	23.7	15 45	4	5 31	04	0.262	4.5	3 50	
Tu.	16	7 40 11	90	10.1	21 27	55	2	24.6	15 45	5	5 37	32	0.240	5.5	4 30	
We.	17	7 44 14	24	10.1	21 18	5	0	25.5	15 45	5	5 43	08	0.217	6.5	5 10	
Th.	18	7 48 16	03	10.1	21 7	53	1	26.4	15 45	6	5 48	30	0.195	7.5	5 51	
Fri.	19	7 52 17	27	10.0	20 57	19	8	27.3	15 45	7	5 52	98	0.171	8.5	6 33	
Sat.	20	7 56 17	95	10.0	20 46	25	3	28.1	15 45	8	5 57	09	0.147	9.5	7 18	
Sun.	21	8 0 18	06	10.0	20 35	9	9	29.0	15 45	9	6 0	63	0.124	10.5	8 6	
Mo.	22	8 4 17	60	10.0	20 23	33	8	29.9	15 45	9	6 3	60	0.100	11.5	8 58	
Tu.	23	8 8 16	56	9.9	20 11	37	3	30.7	15 46	0	6 5	99	0.075	12.5	9 53	
We.	24	8 12 14	94	9.9	19 59	20	6	31.5	15 46	1	6 7	80	0.051	13.5	10 49	
Th.	25	8 16 12	73	9.9	19 46	43	9	32.4	15 46	2	6 9	03	0.027	14.5	11 44	
Fri.	26	8 20 9	93	9.9	19 33	47	5	33.2	15 46	3	6 9	67	0.002	15.5	12 38	
Sat.	27	8 24 6	54	9.8	19 20	31	7	34.0	15 46	4	6 9	72	0.023	16.5	13 29	
Sun.	28	8 28 2	55	9.8	19 6	56	7	34.8	15 46	5	6 9	17	0.047	17.5	14 18	
Mo.	29	8 31 57	97	9.8	18 53	2	7	35.5	15 46	6	6 8	04	0.071	18.5	15 5	
Tu.	30	8 35 52	80	9.8	18 38	50	0	36.3	15 46	8	6 6	33	0.096	19.5	15 52	
We.	31	8 39 47	04	9.7	18 24	18	8	37.1	15 46	9	6 4	02	0.120	20.5	16 41	
Th.	32	8 43 40	70		N 18	9 29	4		15 47	0	6 1	14		21.5	17 32	

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.	Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Mo.	1	15 49.5	15 53.0	58 4.4	58 17.4	22 25 4	22 49 50	11 15 42S.	8 10 23S.
Tu.	2	15 56.5	15 59.7	58 30.0	58 41.7	23 14 23	23 38 51	4 58 12S.	1 41 21S.
We.	3	16 2.7	16 5.4	58 52.8	59 2.9	0 3 24	0 28 9	1 37 54N.	4 57 12N.
Th.	4	16 8.0	16 10.3	59 12.3	59 20.7	0 53 19	1 19 1	8 14 7	11 26 3
Fri.	5	16 12.2	16 13.7	59 27.8	59 33.3	1 45 25	2 12 39	14 30 13	17 23 43
Sat.	6	16 14.8	16 15.3	59 37.2	59 39.1	2 40 49	3 9 59	20 3 25	22 26 9
Sun.	7	16 15.3	16 14.5	59 38.9	59 36.3	3 40 7	4 11 10	24 28 44	26 8 12
Mo.	8	16 13.2	16 11.1	59 31.3	59 23.7	4 42 56	5 15 12	27 21 58	28 8 8
Tu.	9	16 8.3	16 4.8	59 13.3	59 0.6	5 47 38	6 19 55	28 25 37	28 14 18
We.	10	16 0.7	15 56.1	58 45.6	58 28.5	6 51 43	7 22 44	27 35 7	26 29 50
Th.	11	15 50.9	15 45.4	58 9.6	57 49.4	7 52 45	8 21 39	25 0 56	23 11 21
Fri.	12	15 39.6	15 33.7	57 28.2	57 6.5	8 49 22	9 15 54	21 4 12	18 42 37
Sat.	13	15 27.8	15 21.8	56 44.6	56 22.7	9 41 20	10 5 46	16 9 33	13 27 42
Sun.	14	15 16.1	15 10.7	56 1.8	55 42.1	10 29 19	10 52 8	10 39 32	7 47 10
Mo.	15	15 5.7	15 1.2	55 23.7	55 7.0	11 14 21	11 36 8	4 52 29N.	1 57 7N.
Tu.	16	14 57.1	14 53.7	54 52.2	54 39.7	11 57 36	12 18 55	0 57 31S.	3 50 4S.
We.	17	14 50.9	14 48.9	54 29.5	54 21.9	12 40 12	13 1 37	6 39 22	9 24 13
Th.	18	14 47.4	14 46.7	54 16.5	54 14.0	13 23 15	13 45 16	12 3 30	14 36 1
Fri.	19	14 46.7	14 47.4	54 13.9	54 16.4	14 7 46	14 30 51	17 0 30	19 15 37
Sat.	20	14 48.7	14 50.8	54 21.4	54 28.8	14 54 37	15 19 8	21 19 53	23 11 44
Sun.	21	14 53.3	14 56.4	54 38.2	54 49.6	15 44 26	16 10 33	24 49 27	26 11 20
Mo.	22	15 0.1	15 4.2	55 3.2	55 18.3	16 37 27	17 5 3	27 15 35	28 0 31
Tu.	23	15 8.7	15 13.4	55 34.6	55 52.0	17 33 15	18 1 52	28 24 40	28 26 49
We.	24	15 18.4	15 23.5	56 10.1	56 28.9	18 30 44	18 59 39	28 6 9	27 22 21
Th.	25	15 28.7	15 33.7	56 47.9	57 6.4	19 28 26	19 56 54	26 15 38	24 46 42
Fri.	26	15 38.7	15 43.5	57 24.7	57 42.4	20 24 55	20 52 24	22 56 48	20 47 31
Sat.	27	15 48.0	15 52.1	57 58.8	58 14.1	21 19 19	21 45 40	18 20 50	15 38 54
Sun.	28	15 55.9	15 59.2	58 27.8	58 39.9	22 11 31	22 36 55	12 44 5	9 38 48
Mo.	29	16 2.1	16 4.5	58 50.6	58 59.3	23 1 59	23 26 51	6 25 33S.	3 6 49S.
Tu.	30	16 6.3	16 7.8	59 6.1	59 11.5	23 51 39	0 16 32	0 14 52N.	3 36 57N.
We.	31	16 8.8	16 9.3	59 15.1	59 17.2	0 41 39	1 7 9	6 56 52	10 12 1N.
Th.	32	16 9.5	16 9.3	59 17.8	59 17.1	1 33 11		13 19 42N.	

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	Saturn W.	89 8 37	2465	90 50 39	2458	92 32 51	2450	94 15 14	2443
	Antares W.	86 17 0	2452	87 59 21	2445	89 41 53	2437	91 24 35	2430
	α Arietis E.	62 14 21	2485	60 32 47	2479	58 51 4	2472	57 9 12	2467
	Aldebaran E.	93 30 19	2525	91 49 40	2517	90 8 51	2509	88 27 51	2502
	Sun E.	124 59 16	2789	123 24 34	2781	121 49 41	2772	120 14 36	2763
2	Saturn W.	102 49 35	2410	104 32 56	2403	106 16 26	2398	108 0 4	2391
	α Aquilæ W.	54 23 9	3665	55 40 33	3607	56 59 0	3552	58 18 27	3502
	α Arietis E.	48 37 57	2441	46 55 21	2436	45 12 38	2433	43 29 51	2430
	Aldebaran E.	80 0 26	2470	78 18 30	2464	76 36 26	2458	74 54 13	2453
	Sun E.	112 16 27	2722	110 40 16	2715	109 3 56	2707	107 27 25	2699
3	α Aquilæ W.	65 8 24	3301	66 32 34	3270	67 57 21	3241	69 22 42	3213
	α Arietis E.	34 55 0	2424	33 11 59	2425	31 29 0	2428	29 46 5	2433
	Aldebaran E.	66 21 21	2429	64 38 27	2424	62 55 27	2421	61 12 23	2418
	Sun E.	99 22 20	2662	97 44 50	2655	96 7 10	2649	94 29 21	2641
4	α Aquilæ W.	76 36 50	3106	78 4 52	3090	79 33 14	3075	81 1 54	3062
	Fomalhaut W.	48 53 14	2758	50 28 37	2729	52 4 38	2703	53 41 14	2679
	α Pegasi W.	29 11 18	3516	30 31 25	3386	31 53 57	3277	33 18 36	3181
	Aldebaran E.	52 36 12	2411	50 52 53	2412	49 9 36	2413	47 26 20	2416
	Sun E.	86 18 1	2610	84 39 19	2604	83 0 29	2598	81 21 31	2593
5	α Aquilæ W.	88 28 38	3019	89 58 27	3014	91 28 22	3010	92 58 22	3010
	Fomalhaut W.	61 51 30	2585	63 30 45	2570	65 10 21	2557	66 50 15	2545
	α Pegasi W.	40 46 17	2855	42 19 34	2811	43 53 48	2771	45 28 54	2735
	Aldebaran E.	38 51 30	2449	37 9 5	2462	35 26 58	2477	33 45 13	2497
	Sun E.	73 4 53	2567	71 25 13	2563	69 45 27	2559	68 5 35	2556
6	Fomalhaut W.	75 13 28	2500	76 54 42	2493	78 36 5	2488	80 17 35	2483
	α Pegasi W.	53 34 42	2605	55 13 30	2587	56 52 43	2571	58 32 18	2555
	Aldebaran E.	25 25 29	2681	23 48 24	2750	22 12 50	2835	20 39 8	2946
	Sun E.	59 45 7	2540	58 4 50	2539	56 24 31	2537	54 44 10	2535
7	Fomalhaut W.	88 46 20	2472	90 28 12	2474	92 10 2	2475	93 51 51	2477
	α Pegasi W.	66 54 49	2502	68 36 0	2495	70 17 20	2489	71 58 48	2485
	α Arietis W.	23 24 6	2370	25 8 24	2351	26 53 9	2335	28 38 17	2323
	Sun E.	46 22 10	2538	44 41 49	2539	43 1 30	2541	41 21 14	2544
8	α Pegasi W.	80 27 17	2477	82 9 3	2478	83 50 47	2460	85 32 28	2483
	α Arietis W.	37 27 17	2293	39 13 27	2292	40 59 38	2291	42 45 50	2292
12	Mars E.	59 3 12	2711	57 26 46	2726	55 50 40	2741	54 14 55	2756
	Jupiter E.	61 39 39	2572	60 0 5	2586	58 20 51	2601	56 41 58	2616
	Spica ♀ E.	72 44 58	2530	71 4 26	2544	69 24 14	2558	67 44 22	2574
	Saturn E.	115 5 27	2553	113 25 27	2567	111 45 47	2580	110 6 25	2594
13	Sun W.	31 57 47	3020	33 27 35	3034	34 57 6	3046	36 26 22	3060
	Mars E.	46 21 16	2835	44 47 34	2852	43 14 13	2867	41 41 12	2883
	Jupiter E.	48 32 44	2694	46 55 56	2710	45 19 30	2726	43 43 24	2742
	Spica ♀ E.	59 30 5	2648	57 52 15	2662	56 14 44	2677	54 37 33	2692
	Saturn E.	101 54 22	2660	100 16 56	2681	98 39 50	2695	97 3 3	2709
14	Sun W.	43 48 29	3129	45 16 3	3143	46 43 21	3157	48 10 22	3171
	Mars E.	34 1 13	2962	32 30 13	2977	30 59 32	2993	29 29 11	3009

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	Saturn W.	95 57 47	2436	97 40 30	2430	99 23 22	2423	101 6 24	2417
	Antares W.	93 7 27	2422	94 50 30	2415	96 33 43	2408	98 17 6	2401
	α Arietis E.	55 27 12	2461	53 45 4	2456	52 2 49	2450	50 20 26	2446
	Aldebaran E.	86 46 41	2495	85 5 21	2489	83 23 52	2482	81 42 14	2475
	Sun E.	118 39 20	2755	117 3 53	2747	115 28 15	2738	113 52 26	2731
2	Saturn W.	109 43 51	2385	111 27 47	2380	113 11 51	2374	114 56 3	2369
	α Aquilæ W.	59 38 49	2455	61 0 3	2413	62 22 5	2372	63 44 53	2335
	α Arietis E.	41 46 59	2427	40 4 2	2425	38 21 3	2424	36 38 2	2423
	Aldebaran E.	73 11 53	2447	71 29 25	2442	69 46 50	2438	68 4 9	2433
	Sun E.	105 50 41	2692	104 13 53	2684	102 36 52	2677	100 59 41	2669
3	α Aquilæ W.	70 48 36	3188	72 15 0	3164	73 41 52	3143	75 9 9	3124
	α Arietis E.	28 3 18	2441	26 20 42	2452	24 38 21	2467	22 56 21	2486
	Aldebaran E.	59 29 14	2416	57 46 2	2414	56 2 47	2412	54 19 30	2412
	Sun E.	92 51 22	2635	91 13 15	2629	89 34 59	2622	87 56 34	2616
4	α Aquilæ W.	82 30 50	3051	84 0 0	3040	85 29 23	3032	86 58 56	3025
	Fomalhaut W.	55 18 22	2657	56 56 0	2637	58 34 5	2618	60 12 36	2601
	α Pegasi W.	34 45 8	3098	36 13 20	3025	37 43 2	2961	39 14 4	2905
	Aldebaran E.	45 43 8	2419	44 0 1	2424	42 17 1	2431	40 34 10	2438
	Sun E.	79 42 26	2587	78 3 13	2582	76 23 53	2577	74 44 26	2572
5	α Aquilæ W.	94 28 22	3010	95 58 22	3012	97 28 20	3015	98 58 14	3021
	Fomalhaut W.	68 30 26	2534	70 10 52	2524	71 51 32	2515	73 32 24	2507
	α Pegasi W.	47 4 47	2704	48 41 22	2675	50 18 35	2649	51 56 23	2626
	Aldebaran E.	32 3 55	2520	30 23 10	2548	28 43 4	2584	27 3 47	2627
	Sun E.	66 25 39	2551	64 45 37	2548	63 5 31	2545	61 25 21	2543
6	Fomalhaut W.	81 59 12	2479	83 40 54	2477	85 22 40	2475	87 4 29	2473
	α Pegasi W.	60 12 15	2541	61 52 31	2530	63 33 3	2520	65 13 49	2510
	Aldebaran E.	19 7 48	3091	17 39 27	3282	16 14 55	3543	14 55 18	3905
	Sun E.	53 3 46	2535	51 23 24	2535	49 42 58	2535	48 2 33	2536
7	Fomalhaut W.	95 33 37	2479	97 15 18	2483	98 56 56	2489	100 38 25	2495
	α Pegasi W.	73 40 22	2481	75 22 2	2479	77 3 45	2477	78 45 31	2477
	α Arietis W.	30 23 43	2313	32 9 25	2306	33 55 14	2301	35 41 12	2296
	Sun E.	39 41 2	2548	38 0 50	2552	36 20 55	2558	34 41 2	2564
8	α Pegasi W.	87 14 5	2487	88 55 37	2492	90 37 2	2497	92 18 19	2503
	α Arietis W.	44 32 1	2293	46 18 11	2296	48 4 17	2298	49 50 20	2302
12	Mars E.	52 39 30	2772	51 4 25	2788	49 29 42	2804	47 55 19	2819
	Jupiter E.	55 3 25	2632	53 25 13	2648	51 47 23	2663	50 9 53	2678
	Spica ♀ E.	66 4 51	2588	64 25 39	2603	62 46 48	2617	61 8 16	2632
	Saturn E.	108 27 22	2608	106 48 38	2622	105 10 13	2637	103 32 8	2651
13	Sun W.	37 55 21	3073	39 24 3	3087	40 52 29	3101	42 20 37	3115
	Mars E.	40 8 31	2899	38 36 11	2916	37 4 12	2931	35 32 33	2946
	Jupiter E.	42 7 40	2758	40 32 17	2773	38 57 14	2790	37 22 33	2806
	Spica ♀ E.	53 0 42	2707	51 24 11	2721	49 47 59	2736	48 12 7	2750
	Saturn E.	95 26 35	2724	93 50 27	2738	92 14 38	2753	90 39 8	2768
14	Sun W.	49 37 6	3184	51 3 34	3198	52 29 46	3212	53 55 41	3224
	Mars E.	27 59 9	3025	26 29 27	3040	25 0 4	3056	23 31 0	3071

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
14	Jupiter E.	35 48 13	2822	34 14 14	2838	32 40 35	2855	31 7 18	2871
	Spica ♏ E.	46 36 34	2764	45 1 19	2779	43 26 24	2792	41 51 46	2807
	Saturn E.	89 3 58	2782	87 29 6	2795	85 54 32	2810	84 20 17	2825
	Antares E.	92 30 50	2763	90 55 34	2778	89 20 38	2792	87 46 0	2805
15	Sun W.	55 21 22	3237	56 46 47	3250	58 11 57	3263	59 36 52	3275
	Spica ♏ E.	34 3 4	2873	32 30 10	2885	30 57 32	2898	29 25 10	2909
	Saturn E.	76 33 29	2891	75 0 59	2904	73 28 45	2916	71 56 47	2929
	Antares E.	79 57 10	2871	78 24 14	2883	76 51 33	2895	75 19 8	2907
16	Sun W.	66 38 4	3330	68 1 41	3340	69 25 6	3350	70 48 19	3359
	Regulus W.	32 16 24	2964	33 47 22	2973	35 18 9	2982	36 48 44	2990
	Venus W.	21 27 24	3345	22 50 44	3355	24 13 52	3365	25 36 49	3374
	Saturn E.	64 20 44	2986	62 50 14	2997	61 19 58	3007	59 49 54	3017
	Antares E.	67 40 40	2961	66 9 38	2970	64 38 47	2979	63 8 8	2988
17	Sun W.	77 42 2	3399	79 4 20	3404	80 26 32	3411	81 48 36	3416
	Regulus W.	44 19 12	3026	45 48 52	3033	47 18 24	3039	48 47 49	3043
	Venus W.	32 29 5	3413	33 51 7	3419	35 13 2	3426	36 34 49	3431
	Saturn E.	52 22 34	3063	50 53 39	3071	49 24 54	3079	47 56 19	3087
	Antares E.	55 37 26	3025	54 7 44	3031	52 38 10	3037	51 8 43	3042
18	Sun W.	88 37 37	3436	89 59 13	3439	91 20 46	3440	92 42 17	3442
	Regulus W.	56 13 32	3062	57 42 28	3064	59 11 22	3066	60 40 13	3068
	Venus W.	43 22 26	3450	44 43 46	3453	46 5 3	3455	47 26 18	3455
	Saturn E.	40 35 46	3124	39 8 6	3132	37 40 36	3139	36 13 14	3147
	Antares E.	43 42 51	3061	42 13 54	3063	40 44 59	3065	39 16 7	3066
	a Aquilæ E.	96 32 8	3837	95 17 44	3835	94 3 18	3834	92 48 51	3834
19	Sun W.	99 29 38	3441	100 51 8	3439	102 12 40	3438	103 34 14	3435
	Venus W.	54 12 24	3451	55 33 40	3452	56 54 58	3449	58 16 19	3447
	Jupiter W.	24 38 21	3149	26 5 31	3143	27 32 48	3138	29 0 12	3133
	Mars W.	23 59 51	3290	25 24 14	3287	26 48 41	3284	28 13 11	3281
	Antares E.	31 51 59	3067	30 23 9	3065	28 54 16	3062	27 25 20	3060
	a Aquilæ E.	86 36 36	3837	85 22 12	3838	84 7 49	3840	82 53 28	3843
20	Sun W.	110 23 0	3415	111 45 0	3409	113 7 6	3403	114 29 19	3397
	Venus W.	65 4 3	3424	66 25 52	3419	67 47 47	3412	69 9 50	3405
	Jupiter W.	36 18 49	3105	37 46 53	3098	39 15 5	3091	40 43 25	3084
	Mars W.	35 16 51	3258	36 41 52	3252	38 7 0	3246	39 32 15	3240
	Spica ♏ W.	25 55 59	3043	27 25 19	3038	28 54 44	3031	30 24 18	3026
	a Aquilæ E.	76 42 35	3863	75 28 38	3870	74 14 48	3877	73 1 5	3884
21	Sun W.	121 22 19	3359	122 45 22	3351	124 8 34	3342	125 31 57	3332
	Venus W.	76 2 9	3365	77 25 5	3356	78 48 12	3346	80 11 30	3337
	Jupiter W.	48 7 20	3045	49 36 37	3036	51 6 5	3027	52 35 44	3018
	Mars W.	46 40 33	3202	48 6 40	3193	49 32 58	3183	50 59 27	3174
	Spica ♏ W.	37 54 7	2989	39 24 33	2981	40 55 9	2973	42 25 56	2963
	a Aquilæ E.	66 54 45	3939	65 42 5	3953	64 29 39	3969	63 17 29	3987
22	Venus W.	87 11 1	3281	88 35 35	3270	90 0 22	3258	91 25 23	3245
	Jupiter W.	60 7 0	2966	61 37 55	2956	63 9 3	2945	64 40 25	2934
	Mars W.	58 14 47	3123	59 42 29	3111	61 10 25	3100	62 38 34	3088
	Spica ♏ W.	50 2 49	2914	51 34 50	2904	53 7 4	2892	54 39 33	2882

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
14	Jupiter E.	29 34 22	2887	28 1 47	2905	26 29 35	2922	24 57 44	2940
	Spica ♏ E.	40 17 27	2821	38 43 26	2833	37 9 41	2847	35 36 14	2860
	Saturn E.	82 46 21	2838	81 12 42	2851	79 39 20	2865	78 6 16	2878
	Antares E.	86 11 39	2819	84 37 36	2833	83 3 51	2845	81 30 22	2859
15	Sun W.	61 1 33	3287	62 26 0	3298	63 50 14	3309	65 14 15	3319
	Spica ♏ E.	27 53 2	2921	26 21 10	2931	24 49 31	2943	23 18 7	2954
	Saturn E.	70 25 5	2941	68 53 38	2953	67 22 26	2964	65 51 28	2975
	Antares E.	73 46 58	2918	72 15 2	2930	70 43 21	2941	69 11 54	2951
16	Sun W.	72 11 23	3368	73 34 16	3376	74 57 0	3384	76 19 35	3391
	Regulus W.	38 19 9	2998	39 49 24	3006	41 19 29	3014	42 49 25	3021
	Venus W.	26 59 35	3383	28 22 11	3391	29 44 38	3399	31 6 56	3407
	Saturn E.	58 20 2	3027	56 50 23	3036	55 20 55	3046	53 51 39	3055
	Antares E.	61 37 40	2997	60 7 23	3004	58 37 15	3011	57 7 16	3018
17	Sun W.	83 10 35	3422	84 32 27	3425	85 54 15	3430	87 15 58	3433
	Regulus W.	50 17 8	3018	51 46 21	3052	53 15 29	3056	54 44 33	3060
	Venus W.	37 56 30	3436	39 18 6	3441	40 39 36	3444	42 1 3	3447
	Saturn E.	46 27 54	3095	44 59 38	3103	43 31 32	3110	42 3 34	3118
	Antares E.	49 39 22	3047	48 10 7	3051	46 40 57	3055	45 11 52	3058
18	Sun W.	94 3 46	3443	95 25 14	3443	96 46 42	3444	98 8 9	3442
	Regulus W.	62 9 2	3069	63 37 50	3069	65 6 38	3069	66 35 26	3068
	Venus W.	48 47 32	3457	50 8 44	3456	51 29 57	3456	52 51 10	3455
	Saturn E.	34 46 1	3156	33 18 59	3164	31 52 7	3173	30 25 26	3184
	Antares E.	37 47 16	3067	36 18 26	3068	34 49 37	3068	33 20 48	3068
	α Aquilæ E.	91 34 24	3833	90 19 56	3834	89 5 29	3834	87 51 2	3835
19	Sun W.	104 55 51	3432	106 17 32	3429	107 39 16	3424	109 1 5	3419
	Venus W.	59 37 43	3443	60 59 11	3439	62 20 43	3435	63 42 20	3430
	Jupiter W.	30 27 42	3127	31 55 19	3122	33 23 2	3116	34 50 52	3110
	Mars W.	29 37 45	3277	31 2 24	3272	32 27 8	3268	33 51 57	3264
	Antares E.	25 56 22	3057	24 27 20	3055	22 58 15	3051	21 29 5	3047
	α Aquilæ E.	81 39 10	3846	80 24 55	3850	79 10 44	3854	77 56 37	3858
20	Sun W.	115 51 39	3391	117 14 6	3383	118 36 42	3376	119 59 26	3368
	Venus W.	70 32 1	3399	71 54 19	3391	73 16 46	3382	74 39 23	3374
	Jupiter W.	42 11 54	3077	43 40 31	3069	45 9 18	3062	46 38 14	3054
	Mars W.	40 57 37	3232	42 23 8	3225	43 48 47	3218	45 14 35	3209
	Spica ♏ W.	31 53 59	3019	33 23 48	3013	34 53 45	3006	36 23 51	2998
	α Aquilæ E.	71 47 29	3893	70 34 2	3903	69 20 45	3914	68 7 39	3925
21	Sun W.	126 55 31	3323	128 19 16	3313	129 43 12	3303	131 7 20	3293
	Venus W.	81 34 59	3326	82 58 41	3315	84 22 35	3305	85 46 41	3293
	Jupiter W.	54 5 35	3009	55 35 37	2995	57 5 52	2988	58 36 20	2978
	Mars W.	52 26 7	3165	53 52 58	3154	55 20 2	3144	56 47 18	3134
	Spica ♏ W.	43 56 55	2954	45 28 5	2945	46 59 27	2935	48 31 2	2925
	α Aquilæ E.	62 5 37	4009	60 54 6	4031	59 42 57	4054	58 32 11	4082
22	Venus W.	92 50 39	3232	94 16 10	3219	95 41 56	3206	97 7 58	3194
	Jupiter W.	66 12 1	2922	67 43 52	2910	69 15 58	2896	70 48 19	2887
	Mars W.	64 6 58	3077	65 35 36	3065	67 4 29	3052	68 33 37	3041
	Spica ♏ W.	56 12 15	2870	57 45 12	2859	59 18 24	2846	60 51 52	2835

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.			P.L. of Diff.			IIIh.			P.L. of Diff.			VIh.			P.L. of Diff.			IXh.			P.L. of Diff.		
		°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
22	Fomalhaut E.	78	47	40	3187			77	21	15	3179			75	54	41	3172			74	27	59	3166		
23	Venus W.	98	34	15	3180			100	0	48	3167			101	27	37	3153			102	54	43	3139		
	Jupiter W.	72	20	55	2874			73	53	47	2862			75	26	55	2849			77	0	19	2837		
	Mars W.	70	2	59	3027			71	32	38	3015			73	2	32	3002			74	32	42	2989		
	Spica $\mathcal{M}$ W.	62	25	34	2823			63	59	32	2811			65	33	46	2798			67	8	16	2786		
	Fomalhaut E.	67	12	34	3137			65	45	9	3133			64	17	39	3129			62	50	4	3126		
	$\alpha$ Pegasi E.	89	1	12	3065			87	32	19	3052			86	3	11	3041			84	33	49	3030		
24	Jupiter W.	84	51	23	2773			86	26	26	2760			88	1	46	2748			89	37	22	2735		
	Mars W.	82	7	37	2924			83	39	26	2911			85	11	31	2898			86	43	53	2884		
	Saturn W.	33	32	57	2812			35	7	9	2793			36	41	46	2774			38	16	48	2756		
	Antares W.	29	10	22	2723			30	46	31	2711			32	22	57	2698			33	59	40	2685		
	Fomalhaut E.	55	31	44	3127			54	4	7	3131			52	36	35	3137			51	9	10	3146		
	$\alpha$ Pegasi E.	77	3	42	2979			75	33	3	2970			74	2	13	2962			72	31	13	2954		
25	Jupiter W.	97	39	34	2672			99	16	51	2660			100	54	24	2649			102	32	13	2637		
	Mars W.	94	29	54	2820			96	3	56	2807			97	38	15	2794			99	12	51	2782		
	Saturn W.	46	17	46	2672			47	55	3	2658			49	32	40	2643			51	10	37	2629		
	Antares W.	42	7	30	2622			43	45	55	2610			45	24	37	2598			47	3	35	2586		
	Fomalhaut E.	43	55	29	3225			42	29	49	3252			41	4	41	3283			39	40	10	3321		
	$\alpha$ Pegasi E.	64	53	54	2924			63	22	6	2920			61	50	13	2918			60	18	17	2916		
26	Mars W.	107	9	46	2723			108	45	55	2711			110	22	20	2700			111	59	0	2690		
	Saturn W.	59	25	3	2562			61	4	50	2551			62	44	53	2538			64	25	13	2527		
	Antares W.	55	22	29	2528			57	3	3	2517			58	43	53	2507			60	24	57	2495		
	$\alpha$ Pegasi E.	52	38	47	2932			51	7	8	2940			49	35	40	2950			48	4	25	2965		
	$\alpha$ Arietis E.	92	56	58	2553			91	16	58	2541			89	36	42	2530			87	56	11	2520		
27	Saturn W.	72	50	45	2474			74	32	35	2464			76	14	39	2455			77	56	56	2446		
	Antares W.	68	53	56	2446			70	36	25	2437			72	19	7	2428			74	2	2	2419		
	$\alpha$ Pegasi E.	40	33	55	3087			39	5	30	3128			37	37	54	3175			36	11	15	3231		
	$\alpha$ Arietis E.	79	30	4	2172			77	48	11	2463			76	6	5	2454			74	23	47	2446		
28	Saturn W.	86	31	20	2406			88	14	46	2399			89	58	22	2393			91	42	7	2387		
	Antares W.	82	39	30	2380			84	23	33	2374			86	7	45	2367			87	52	7	2360		
	$\alpha$ Arietis E.	65	49	34	2410			64	6	13	2404			62	22	44	2398			60	39	7	2393		
	Aldebaran E.	97	5	43	2455			95	23	27	2449			93	41	2	2441			91	58	26	2435		
29	Saturn W.	100	22	58	2360			102	7	30	2355			103	52	9	2352			105	36	53	2348		
	$\alpha$ Arietis E.	51	59	19	2373			50	15	5	2370			48	30	47	2368			46	46	26	2366		
	Aldebaran E.	83	23	21	2409			81	39	59	2405			79	56	31	2401			78	12	57	2398		
	Sun E.	141	26	59	2659			139	49	24	2653			138	11	41	2647			136	33	50	2641		
30	$\alpha$ Aquilæ W.	62	27	22	3316			63	51	15	3282			65	15	47	3253			66	40	54	3225		
	Fomalhaut W.	34	9	26	3231			35	34	59	3150			37	2	8	3081			38	30	41	3019		
	$\alpha$ Arietis E.	38	4	26	2368			36	20	5	2371			34	35	49	2376			32	51	40	2381		
	Aldebaran E.	69	34	12	2388			67	50	20	2387			66	6	27	2387			64	22	34	2388		
	Sun E.	128	22	49	2618			126	44	19	2615			125	5	44	2611			123	27	4	2609		
31	$\alpha$ Aquilæ W.	73	53	43	3122			75	21	26	3107			76	49	27	3094			78	17	44	3083		
	Fomalhaut W.	46	9	43	2805			47	44	9	2775			49	19	9	2750			50	54	43	2726		
	$\alpha$ Pegasi W.	26	46	40	3770			28	2	13	3603			29	20	44	3463			30	41	49	3345		
	Aldebaran E.	55	43	36	2398			53	59	59	2402			52	16	27	2407			50	33	3	2413		
	Sun E.	115	12	56	2598			113	33	58	2596			111	54	57	2595			110	15	55	2591		

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
22	Fomalhaut E.	73 1 9	3159	71 34 11	3153	70 7 5	3147	68 39 52	3143
23	Venus W.	104 22 5	3125	105 49 44	3111	107 17 40	3098	108 45 52	3083
	Jupiter W.	78 33 59	2825	80 7 55	2811	81 42 8	2799	83 16 37	2786
	Mars W.	76 3 8	2976	77 33 51	2963	79 4 50	2950	80 36 5	2937
	Spica $\pi$ W.	68 43 2	2773	70 18 5	2761	71 53 24	2748	73 29 0	2736
	Fomalhaut E.	61 22 26	3124	59 54 46	3124	58 27 5	3123	56 59 23	3125
	$\alpha$ Pegasi E.	83 4 14	3019	81 34 25	3009	80 4 24	2998	78 34 9	2989
24	Jupiter W.	91 13 15	2722	92 49 25	2710	94 25 51	2698	96 2 34	2685
	Mars W.	88 16 32	2872	89 49 27	2859	91 22 39	2845	92 56 8	2832
	Saturn W.	39 52 14	2738	41 28 4	2721	43 4 16	2705	44 40 50	2688
	Antares W.	35 36 40	2672	37 13 57	2660	38 51 31	2647	40 29 22	2635
	Fomalhaut E.	49 41 56	3155	48 14 53	3167	46 48 5	3183	45 21 36	3202
	$\alpha$ Pegasi E.	71 0 2	2946	69 28 42	2939	67 57 13	2934	66 25 37	2928
25	Jupiter W.	104 10 18	2624	105 48 40	2613	107 27 17	2602	109 6 9	2591
	Mars W.	100 47 42	2770	102 22 49	2758	103 58 12	2746	105 33 51	2734
	Saturn W.	52 48 53	2615	54 27 28	2601	56 6 22	2588	57 45 34	2575
	Antares W.	48 42 49	2574	50 22 20	2562	52 2 7	2551	53 42 10	2539
	Fomalhaut E.	38 16 23	3365	36 53 27	3418	35 31 31	3480	34 10 45	3554
	$\alpha$ Pegasi E.	58 46 19	2916	57 14 21	2918	55 42 25	2921	54 10 33	2926
26	Mars W.	113 35 53	2679	115 13 1	2669	116 50 23	2658	118 27 59	2649
	Saturn W.	66 5 49	2515	67 46 41	2504	69 27 48	2495	71 9 9	2484
	Antares W.	62 6 17	2485	63 47 51	2475	65 29 39	2465	67 11 41	2456
	$\alpha$ Pegasi E.	46 33 29	2981	45 2 53	3001	43 32 42	3026	42 3 1	3054
	$\alpha$ Arietis E.	86 15 25	2510	84 34 26	2500	82 53 12	2490	81 11 45	2480
27	Saturn W.	79 39 25	2437	81 22 7	2429	83 5 0	2422	84 48 4	2413
	Antares W.	75 45 9	2411	77 28 28	2404	79 11 57	2396	80 55 38	2388
	$\alpha$ Pegasi E.	34 45 42	2396	33 21 26	2372	31 58 38	2364	30 37 34	23574
	$\alpha$ Arietis E.	72 41 17	2438	70 58 37	2431	69 15 46	2424	67 32 45	2417
28	Saturn W.	93 26 1	2381	95 10 3	2375	96 54 14	2369	98 38 33	2365
	Antares W.	89 36 39	2355	91 21 19	2349	93 6 7	2343	94 51 4	2338
	$\alpha$ Arietis E.	58 55 22	2388	57 11 30	2384	55 27 52	2380	53 43 28	2376
	Aldebaran E.	90 15 41	2429	88 32 48	2423	86 49 46	2418	85 6 37	2413
29	Saturn W.	107 21 42	2345	109 6 36	2342	110 51 34	2340	112 36 36	2337
	$\alpha$ Arietis E.	45 2 3	2366	43 17 39	2364	41 33 13	2366	39 48 49	2366
	Aldebaran E.	76 29 19	2395	74 45 37	2392	73 1 51	2391	71 18 3	2389
	Sun E.	134 55 51	2636	133 17 45	2631	131 39 32	2626	130 1 13	2623
30	$\alpha$ Aquilæ W.	68 6 34	3200	69 32 43	3177	70 59 19	3157	72 26 20	3138
	Fomalhaut W.	40 0 30	2965	41 31 26	2918	43 3 22	2876	44 36 11	2839
	$\alpha$ Arietis E.	31 7 38	2389	29 23 48	2398	27 40 10	2410	25 56 49	2425
	Aldebaran E.	62 38 42	2389	60 54 51	2391	59 11 3	2392	57 27 17	2395
	Sun E.	121 48 21	2606	120 9 34	2604	118 30 44	2602	116 51 51	2600
31	$\alpha$ Aquilæ W.	79 46 14	3074	81 14 56	3066	82 43 47	3060	84 12 46	3055
	Fomalhaut W.	52 30 49	2705	54 7 23	2686	55 44 22	2669	57 21 44	2653
	$\alpha$ Pegasi W.	32 5 8	3243	33 30 26	3157	34 57 27	3082	36 25 59	3017
	Aldebaran E.	48 49 47	2420	47 6 41	2427	45 23 45	2436	43 41 2	2447
	Sun E.	108 36 52	2593	106 57 47	2593	105 18 42	2592	103 39 36	2592

## AT APPARENT NOON.

MEAN  
TIME.THE  
MOON'S

## THE SUN'S

Equation  
of Time,  
to be  
added to  
subt. from  
Apparent  
Time.Diff.  
for  
1 h.

Age.

Meri-  
dian  
Pas-  
sage.

Day of the Week.	Day of the Month.	THE SUN'S										Equation of Time, to be added to sub <sup>t</sup> . from Apparent Time.	Diff. for 1 h.	THE MOON'S											
		Apparent Rt. Ascen.			Diff. for 1 h.	Apparent Declination.			Diff. for 1 h.	Semidi- ameter.	Age.			Meri- dian Pas- sage.											
		h	m	s		°	'	"						°	'	"	d	h	m						
Th.	1	8	43	40	70	9	7	N 18	9	29	4	37	8	15	47	0	6	1	14	0	144	21	5	17	32
Fri.	2	8	47	33	78	9	7	17	54	22	0	38	6	15	47	1	5	57	68	0	169	22	5	18	27
Sat.	3	8	51	26	28	9	7	17	38	57	0	39	3	15	47	3	5	53	63	0	193	23	5	19	25
Sun.	4	8	55	18	19	9	6	17	23	14	6	40	0	15	47	4	5	48	99	0	217	24	5	20	26
Mo.	5	8	59	9	52	9	6	17	7	15	2	40	7	15	47	5	5	43	77	0	242	25	5	21	28
Tu.	6	9	3	0	26	9	6	16	50	59	0	41	4	15	47	7	5	37	97	0	266	26	5	22	28
We.	7	9	6	50	42	9	6	16	34	26	4	42	0	15	47	8	5	31	58	0	290	27	5	23	23
Th.	8	9	10	40	00	9	5	16	17	37	6	42	7	15	48	0	5	24	62	0	314	28	5	24	19
Fri.	9	9	14	28	99	9	5	16	0	33	1	43	3	15	48	1	5	17	08	0	339	0	1	0	14
Sat.	10	9	18	17	40	9	5	15	43	13	1	44	0	15	48	3	5	8	95	0	363	1	1	1	1
Sun.	11	9	22	5	23	9	5	15	25	37	9	44	6	15	48	4	5	0	25	0	386	2	1	1	44
Mo.	12	9	25	52	48	9	4	15	7	47	9	45	2	15	48	6	4	50	98	0	410	3	1	2	25
Tu.	13	9	29	39	16	9	4	14	49	43	4	45	8	15	48	8	4	41	14	0	434	4	1	3	6
We.	14	9	33	25	28	9	4	14	31	24	7	46	4	15	49	0	4	30	73	0	457	5	1	3	46
Th.	15	9	37	10	83	9	4	14	12	52	2	46	9	15	49	2	4	19	76	0	480	6	1	4	27
Fri.	16	9	40	55	83	9	4	13	54	6	2	47	5	15	49	3	4	8	24	0	502	7	1	5	11
Sat.	17	9	44	40	30	9	3	13	35	7	1	48	0	15	49	5	3	56	18	0	525	8	1	5	58
Sun.	18	9	48	24	23	9	3	13	15	55	0	48	5	15	49	7	3	43	59	0	546	9	1	6	48
Mo.	19	9	52	7	64	9	3	12	56	30	5	49	0	15	49	9	3	30	48	0	567	10	1	7	41
Tu.	20	9	55	50	55	9	3	12	36	53	8	49	5	15	50	1	3	16	86	0	588	11	1	8	36
We.	21	9	59	32	96	9	2	12	17	5	1	50	0	15	50	3	3	2	75	0	608	12	1	9	32
Th.	22	10	3	14	88	9	2	11	57	4	9	50	5	15	50	5	2	48	15	0	627	13	1	10	26
Fri.	23	10	6	56	35	9	2	11	36	53	4	50	9	15	50	7	2	33	10	0	646	14	1	11	19
Sat.	24	10	10	37	36	9	2	11	16	30	9	51	4	15	51	0	2	17	60	0	663	15	1	12	9
Sun.	25	10	14	17	94	9	2	10	55	57	7	51	8	15	51	2	2	1	68	0	680	16	1	12	58
Mo.	26	10	17	58	12	9	2	10	35	14	1	52	2	15	51	4	1	45	35	0	697	17	1	13	47
Tu.	27	10	21	37	89	9	1	10	14	20	3	52	7	15	51	6	1	28	62	0	713	18	1	14	36
We.	28	10	25	17	30	9	1	9	53	16	6	53	1	15	51	8	1	11	52	0	727	19	1	15	28
Th.	29	10	28	56	35	9	1	9	32	3	4	53	4	15	52	0	0	54	07	0	742	20	1	16	22
Fri.	30	10	32	35	06	9	1	9	10	41	0	53	8	15	52	2	0	36	27	0	755	21	1	17	20
Sat.	31	10	36	13	46	9	1	8	49	9	6	54	2	15	52	5	0	18	16	0	767	22	1	18	20
Sun.	32	10	39	51	55			N. 8	27	29	5			15	52	7	0	0	25			23	1	19	21

## MEAN TIME.

		THE MOON'S																					
Day of the Week.	Day of the Month.	Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.															
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.														
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "														
Th.	1	16	9.5	16	9.3	59	17.8	59	17.1	1	33	11	1	59	52	13	19	42	N.	16	17	12	N.
Fri.	2	16	8.8	16	7.9	59	15.1	59	12.0	2	27	19	2	55	38	19	1	41		21	30	20	
Sat.	3	16	6.8	16	5.3	59	7.8	59	2.4	3	24	48	3	54	49	23	40	20		25	29	1	
Sun.	4	16	3.6	16	1.5	58	56.0	58	48.3	4	25	33	4	56	52	26	53	58		27	53	14	
Mo.	5	15	59.1	15	56.3	58	39.5	58	29.3	5	28	29	6	0	10	28	25	31		28	30	14	
Tu.	6	15	53.2	15	49.8	58	17.9	58	5.5	6	31	35	7	2	29	28	7	38		27	18	47	
We.	7	15	46.1	15	42.0	57	51.8	57	36.9	7	32	36	8	1	48	26	5	29		24	30	2	
Th.	8	15	37.7	15	33.3	57	21.2	57	4.8	8	29	57	8	57	2	22	35	7		20	23	35	
Fri.	9	15	28.6	15	23.9	56	47.7	56	30.3	9	23	4	9	48	7	17	58	17		15	21	58	
Sat.	10	15	19.1	15	14.4	56	13.0	55	55.7	10	12	16	10	35	39	12	37	12		9	46	21	
Sun.	11	15	9.9	15	5.5	55	38.9	55	22.9	10	58	22	11	20	34	6	51	33		3	54	41	N.
Mo.	12	15	1.4	14	57.7	55	8.0	54	54.3	11	42	23	12	3	58	0	57	28	N.	1	58	34	S.
Tu.	13	14	54.4	14	51.5	54	42.1	54	31.6	12	25	25	12	46	52	4	52	0	S.	7	41	31	
We.	14	14	49.3	14	47.6	54	23.4	54	17.2	13	8	28	13	30	18	10	25	55		13	3	56	
Th.	15	14	46.5	14	46.1	54	13.2	54	11.6	13	52	31	14	15	13	15	34	21		17	55	53	
Fri.	16	14	46.3	14	47.3	54	12.5	54	16.0	14	38	29	15	2	23	20	7	13		22	6	55	
Sat.	17	14	48.9	14	51.3	54	22.2	54	30.9	15	27	1	15	52	24	23	53	29		25	25	21	
Sun.	18	14	54.4	14	58.1	54	42.1	54	55.8	16	18	33	16	45	25	26	40	53		27	38	31	
Mo.	19	15	2.4	15	7.3	55	11.6	55	29.4	17	12	56	17	40	59	28	16	41		28	34	3	
Tu.	20	15	12.7	15	18.4	55	49.3	56	10.4	18	9	27	18	38	8	28	29	32		28	2	22	
We.	21	15	24.5	15	30.8	56	32.8	56	55.9	19	6	53	19	35	31	27	12	15		25	59	20	
Th.	22	15	37.3	15	43.6	57	19.5	57	42.8	20	3	53	20	31	52	24	24	15		22	28	5	
Fri.	23	15	49.8	15	55.8	58	5.5	58	27.4	20	59	25	21	26	28	20	12	20		17	38	52	
Sat.	24	16	1.3	16	6.3	58	47.7	59	6.0	21	53	3	22	19	12	14	49	50		11	47	36	
Sun.	25	16	10.6	16	14.2	59	21.9	59	35.2	22	45	1	23	10	36	8	34	44		5	13	57	S.
Mo.	26	16	17.1	16	19.1	59	45.7	59	53.1	23	36	3	0	1	31	1	48	3	S.	1	40	6	N.
Tu.	27	16	20.3	16	20.7	59	57.6	59	58.9	0	27	8	0	53	3	5	7	33	N.	8	31	18	
We.	28	16	20.3	16	19.1	59	57.5	59	53.2	1	19	25	1	46	19	11	48	21		14	55	40	
Th.	29	16	17.4	16	15.0	59	46.7	59	38.0	2	13	54	2	42	13	17	50	16		20	29	11	
Fri.	30	16	12.2	16	8.9	59	27.5	59	15.6	3	11	18	3	41	8	22	49	36		24	48	54	
Sat.	31	16	5.3	16	1.5	59	2.5	58	48.6	4	11	37	4	42	38	26	24	47		27	35	23	N.
Sun.	32	15	57.7	15	53.6	58	34.4	58	19.5	5	13	57				28	19	28	N.				

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	<i>a</i> Aquilæ W.	85 41 51	3051	87 11 1	3049	88 40 13	3048	90 9 26	3048
	Fomalhaut W.	58 59 27	2640	60 37 28	2628	62 15 45	2617	63 54 17	2607
	<i>a</i> Pegasi W.	37 55 51	2960	39 26 54	2912	40 58 58	2868	42 31 58	2830
	Aldebaran E.	41 58 34	2459	40 16 23	2472	38 34 30	2488	36 53 0	2506
	Sun E.	102 0 30	2591	100 21 23	2592	98 42 17	2591	97 3 10	2593
2	Fomalhaut W.	72 9 42	2575	73 49 11	2572	75 28 45	2569	77 8 23	2566
	<i>a</i> Pegasi W.	50 27 29	2698	52 4 12	2680	53 41 19	2664	55 18 47	2650
	Aldebaran E.	28 33 25	2657	26 55 47	2705	25 19 14	2766	23 44 2	2839
	Sun E.	88 47 54	2596	87 8 54	2599	85 29 57	2599	83 51 1	2601
3	Fomalhaut W.	85 27 4	2564	87 6 48	2566	88 46 29	2569	90 26 7	2571
	<i>a</i> Pegasi W.	63 30 12	2602	65 9 5	2596	66 48 6	2590	68 27 15	2586
	<i>a</i> Arietis W.	19 55 7	2502	21 36 18	2475	23 18 6	2454	25 0 24	2439
	Sun E.	75 37 3	2613	73 58 25	2615	72 19 50	2618	70 41 19	2621
4	<i>a</i> Pegasi W.	76 43 58	2577	78 23 24	2577	80 2 50	2579	81 42 14	2580
	<i>a</i> Arietis W.	33 35 57	2401	35 19 31	2398	37 3 9	2396	38 46 49	2396
	Sun E.	62 29 48	2638	60 51 44	2641	59 13 45	2646	57 35 52	2651
5	<i>a</i> Pegasi W.	89 58 22	2598	91 37 20	2603	93 16 11	2610	94 54 53	2617
	<i>a</i> Arietis W.	47 25 7	2401	49 8 40	2404	50 52 9	2407	52 35 34	2411
	Aldebaran W.	18 46 45	3146	20 13 59	3031	21 43 34	2940	23 15 2	2870
	Sun E.	49 28 3	2675	47 50 50	2681	46 13 45	2687	44 36 48	2693
6	<i>a</i> Arietis W.	61 11 8	2434	62 53 54	2440	64 36 32	2446	66 19 1	2453
	Aldebaran W.	31 9 39	2684	32 46 41	2665	34 24 8	2650	36 1 55	2640
	Sun E.	36 34 17	2729	34 58 16	2738	33 22 26	2746	31 46 47	2756
11	Sun W.	25 5 47	3174	26 32 27	3184	27 58 55	3195	29 25 10	3206
	Jupiter E.	21 29 59	2897	29 57 36	2913	28 25 33	2928	26 53 50	2944
	Mars E.	42 12 22	3038	40 42 56	3050	39 13 45	3063	37 44 50	3077
	Saturn E.	80 32 32	2839	78 58 55	2853	77 25 36	2865	75 52 32	2877
	Antares E.	84 23 41	2807	82 49 22	2819	81 15 19	2830	79 41 30	2841
12	Sun W.	36 33 14	3260	37 58 12	3270	39 22 59	3281	40 47 33	3291
	Mars E.	30 24 21	3143	28 57 3	3156	27 30 13	3170	26 3 16	3183
	Saturn E.	68 10 59	2935	66 39 25	2946	65 8 5	2957	63 36 59	2969
	Antares E.	71 56 3	2897	70 23 40	2906	68 51 29	2917	67 19 32	2927
13	Sun W.	47 47 29	3339	49 10 55	3347	50 34 12	3357	51 57 18	3365
	Saturn E.	56 4 56	3022	54 35 11	3033	53 5 39	3043	51 36 20	3053
	Antares E.	59 42 51	2974	58 12 5	2982	56 41 30	2990	55 11 5	2998
14	Sun W.	58 50 38	3400	60 12 55	3406	61 35 5	3411	62 57 9	3416
	Saturn E.	44 12 44	3101	42 44 36	3111	41 16 40	3120	39 48 55	3131
	Antares E.	47 41 17	3032	46 11 44	3038	44 42 18	3043	43 12 58	3048
	<i>a</i> Aquilæ E.	99 56 14	3822	98 41 35	3822	97 26 56	3822	96 12 16	3822
15	Sun W.	69 46 11	3435	71 7 48	3438	72 29 22	3439	73 50 55	3440
	Venus W.	25 33 38	3362	26 56 38	3364	28 19 36	3365	29 42 32	3366
	Jupiter W.	17 2 33	3225	18 28 12	3214	19 54 5	3204	21 20 9	3196
	Saturn E.	32 33 13	3183	31 6 44	3196	29 40 30	3209	28 14 32	3224
	Antares E.	35 47 36	3065	34 18 44	3068	32 49 55	3070	31 21 9	3071
	<i>a</i> Aquilæ E.	89 59 15	3831	88 44 45	3835	87 30 19	3838	86 15 56	3842

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	<i>a</i> Aquilæ W.	91 38 39	3051	93 7 49	3054	94 36 55	3059	96 5 55	3065
	Fomalhaut W.	65 33 2	2599	67 11 58	2592	68 51 4	2585	70 30 19	2580
	<i>a</i> Pegasi W.	44 5 47	2797	45 40 18	2767	47 15 29	2741	48 51 14	2719
	Aldebaran E.	35 11 55	2527	33 31 20	2552	31 51 19	2582	30 11 59	2616
	Sun E.	95 24 5	2593	93 45 0	2594	92 5 57	2594	90 26 54	2596
2	Fomalhaut W.	78 48 5	2564	80 27 49	2564	82 7 34	2564	83 47 19	2564
	<i>a</i> Pegasi W.	56 56 34	2638	58 34 38	2627	60 12 57	2617	61 51 29	2609
	Aldebaran E.	22 10 25	2931	20 38 45	3047	19 9 30	3197	17 43 17	3393
	Sun E.	82 12 8	2604	80 33 18	2605	78 54 30	2607	77 15 45	2610
3	Fomalhaut W.	92 5 42	2574	93 45 12	2579	95 24 36	2583	97 3 54	2589
	<i>a</i> Pegasi W.	70 6 29	2583	71 45 47	2580	73 25 9	2579	75 4 33	2578
	<i>a</i> Arietis W.	26 43 3	2427	28 25 59	2417	30 9 9	2410	31 52 29	2405
	Sun E.	69 2 52	2624	67 24 29	2627	65 46 10	2630	64 7 56	2635
4	<i>a</i> Pegasi W.	83 21 36	2582	85 0 55	2586	86 40 9	2590	88 19 18	2593
	<i>a</i> Arietis W.	40 30 30	2395	42 14 12	2396	43 57 53	2398	45 41 31	2399
	Sun E.	55 58 6	2655	54 20 25	2660	52 42 51	2664	51 5 23	2670
5	<i>a</i> Pegasi W.	96 33 25	2624	98 11 48	2632	99 50 0	2641	101 28 0	2649
	<i>a</i> Arietis W.	54 18 53	2415	56 2 6	2419	57 45 13	2424	59 28 14	2429
	Aldebaran W.	24 47 59	2815	26 22 7	2771	27 57 13	2735	29 33 7	2706
	Sun E.	42 59 59	2701	41 23 20	2707	39 46 49	2714	38 10 28	2722
6	<i>a</i> Arietis W.	68 1 21	2459	69 43 32	2466	71 25 33	2473	73 7 24	2480
	Aldebaran W.	37 39 56	2630	39 18 10	2624	40 56 32	2619	42 35 1	2616
	Sun E.	30 11 21	2765	28 36 7	2775	27 1 6	2785	25 26 19	2797
11	Sun W.	30 51 12	3216	32 17 2	3228	33 42 38	3238	35 8 2	3248
	Jupiter E.	25 22 27	2961	23 51 26	2980	22 20 48	2999	20 50 34	3020
	Mars E.	36 16 12	3090	34 47 50	3103	33 19 44	3116	31 51 54	3130
	Saturn E.	74 19 43	2888	72 47 9	2901	71 14 51	2913	69 42 48	2924
	Antares E.	78 7 56	2852	76 34 36	2864	75 1 31	2875	73 28 40	2886
12	Sun W.	42 11 55	3301	43 36 5	3311	45 0 4	3320	46 23 52	3330
	Mars E.	24 36 47	3198	23 10 35	3212	21 44 40	3228	20 19 4	3244
	Saturn E.	62 6 7	2980	60 35 29	2991	59 5 5	3002	57 34 54	3012
	Antares E.	65 47 48	2937	64 16 16	2946	62 44 56	2956	61 13 48	2965
13	Sun W.	53 20 15	3372	54 43 4	3380	56 5 43	3387	57 28 14	3394
	Saturn E.	50 7 13	3063	48 38 18	3073	47 9 35	3083	45 41 4	3092
	Antares E.	53 40 50	3006	52 10 44	3013	50 40 47	3019	49 10 58	3026
14	Sun W.	64 19 7	3422	65 40 59	3425	67 2 47	3429	68 24 31	3432
	Saturn E.	38 21 23	3140	36 54 2	3150	35 26 53	3160	33 59 56	3172
	Antares E.	41 43 44	3052	40 14 35	3056	38 45 31	3060	37 16 32	3062
	<i>a</i> Aquilæ E.	94 57 37	3823	93 42 59	3825	92 28 23	3826	91 13 48	3828
15	Sun W.	75 12 26	3441	76 33 56	3442	77 55 25	3441	79 16 55	3441
	Venus W.	31 5 27	3366	32 28 22	3365	33 51 18	3365	35 14 15	3364
	Jupiter W.	22 46 23	3190	24 12 44	3185	25 39 11	3179	27 5 45	3174
	Saturn E.	26 48 51	3241	25 23 31	3261	23 58 34	3284	22 34 4	3311
	Antares E.	29 52 24	3072	28 23 40	3073	26 54 57	3073	25 26 14	3072
	<i>a</i> Aquilæ E.	85 1 37	3846	83 47 22	3852	82 33 13	3857	81 19 9	3861

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
16	Sun W.	80 38 25	3439	81 59 57	3438	83 21 31	3435	84 43 8	3433
	Venus W.	36 37 13	3361	38 0 14	3359	39 23 17	3356	40 46 24	3352
	Jupiter W.	28 32 25	3169	29 59 11	3165	31 26 2	3160	32 52 59	3155
	Spica ♀ W.	21 59 3	3074	23 27 44	3072	24 56 28	3069	26 25 15	3066
	α Aquilæ E.	80 5 10	3868	78 51 18	3875	77 37 33	3882	76 23 55	3890
	Fomalhaut E.	105 9 12	3351	103 45 59	3345	102 22 40	3340	100 59 15	3334
17	Sun W.	91 32 9	3410	92 54 14	3405	94 16 25	3399	95 38 43	3391
	Venus W.	47 43 8	3328	49 6 47	3321	50 30 34	3314	51 54 29	3307
	Jupiter W.	40 9 18	3127	41 36 55	3120	43 4 40	3113	44 32 34	3106
	Spica ♀ W.	33 50 15	3046	35 19 31	3040	36 48 54	3034	38 18 25	3027
	Mars W.	26 36 44	3307	28 0 48	3298	29 25 2	3290	30 49 25	3282
	α Aquilæ E.	70 17 58	3940	69 5 19	3952	67 52 52	3966	66 40 39	3981
	Fomalhaut E.	94 0 35	3307	92 36 31	3301	91 12 21	3294	89 48 3	3288
18	Sun W.	102 32 25	3350	103 55 39	3340	105 19 4	3329	106 42 42	3319
	Venus W.	58 56 25	3262	60 21 21	3253	61 46 28	3242	63 11 48	3230
	Jupiter W.	51 54 24	3064	53 23 18	3054	54 52 24	3044	56 21 42	3034
	Spica ♀ W.	45 48 10	2989	47 18 37	2980	48 49 15	2970	50 20 6	2960
	Mars W.	37 53 54	3236	39 19 21	3225	40 45 1	3215	42 10 53	3204
	Fomalhaut E.	82 44 40	3256	81 19 37	3248	79 54 25	3241	78 29 5	3234
	α Pegasi E.	104 46 39	3243	103 21 21	3231	101 55 48	3219	100 30 1	3206
19	Sun W.	113 44 6	3259	115 9 6	3246	116 34 21	3232	117 59 52	3218
	Venus W.	70 22 1	3168	71 48 49	3153	73 15 54	3139	74 43 16	3125
	Jupiter W.	63 51 35	2976	65 22 18	2964	66 53 16	2951	68 24 30	2937
	Spica ♀ W.	57 57 36	2905	59 29 49	2893	61 2 17	2880	62 35 2	2867
	Mars W.	49 23 39	3143	50 50 57	3129	52 18 31	3116	53 46 21	3103
	Fomalhaut E.	71 20 21	3201	69 54 13	3195	68 27 58	3188	67 1 35	3183
	α Pegasi E.	93 17 22	3143	91 50 5	3131	90 22 33	3119	88 54 46	3106
20	Sun W.	125 11 43	3144	126 38 59	3129	128 6 34	3113	129 34 28	3096
	Venus W.	82 4 31	3049	83 33 43	3033	85 3 15	3017	86 33 7	3001
	Jupiter W.	76 5 0	2868	77 38 0	2853	79 11 19	2838	80 44 57	2823
	Mars W.	61 9 48	3030	62 39 24	3014	64 9 19	2999	65 39 33	2983
	Saturn W.	29 1 39	2934	30 33 15	2908	32 5 24	2883	33 38 4	2860
	Fomalhaut E.	59 48 12	3162	58 21 18	3161	56 54 22	3161	55 27 26	3160
	α Pegasi E.	81 32 1	3044	80 2 43	3032	78 33 10	3020	77 3 22	3008
21	Venus W.	94 7 39	2916	95 39 38	2899	97 11 58	2881	98 44 41	2864
	Jupiter W.	88 38 7	2746	90 13 46	2730	91 49 46	2714	93 26 7	2698
	Mars W.	73 15 44	2903	74 47 59	2886	76 20 36	2870	77 53 34	2853
	Saturn W.	41 28 39	2754	43 4 7	2735	44 40 1	2715	46 16 21	2696
	Antares W.	37 13 37	2678	38 50 47	2663	40 28 17	2646	42 6 9	2630
	Fomalhaut E.	48 13 26	3188	46 47 2	3200	45 20 53	3216	43 55 3	3235
	α Pegasi E.	69 30 50	2955	67 59 41	2946	66 28 21	2938	64 56 50	2929
22	Venus W.	106 33 51	2778	108 8 48	2760	109 44 8	2744	111 19 50	2727
	Jupiter W.	101 33 12	2620	103 11 40	2604	104 50 30	2588	106 29 41	2573
	Mars W.	85 43 43	2771	87 18 49	2754	88 54 17	2739	90 30 5	2723
	Saturn W.	54 24 16	2605	56 3 4	2588	57 42 16	2572	59 21 50	2554
	Antares W.	50 20 52	2552	52 0 53	2537	53 41 15	2521	55 21 59	2505
	α Pegasi E.	57 17 3	2905	55 44 50	2903	54 12 35	2903	52 40 20	2906

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° / "		° / "		° / "		° / "	
16	Sun W.	86 4 47 3429		87 26 31 3426		88 48 18 3421		90 10 11 3416	
	Venus W.	42 9 35 3349		43 32 50 3345		44 56 10 3339		46 19 36 3334	
	Jupiter W.	34 20 2 3150		35 47 11 3144		37 14 27 3139		38 41 49 3134	
	Spica ♀ W.	27 54 6 3063		29 23 1 3060		30 52 0 3056		32 21 4 3050	
	α Aquilæ E.	75 10 25 3899		73 57 4 3908		72 43 52 3917		71 30 49 3928	
	Fomalhaut E.	99 35 43 3330		98 12 6 3324		96 48 22 3319		95 24 32 3313	
17	Sun W.	97 1 10 3385		98 23 44 3376		99 46 28 3368		101 9 21 3359	
	Venus W.	53 18 32 3299		54 42 45 3290		56 7 8 3281		57 31 41 3272	
	Jupiter W.	46 0 36 3098		47 28 48 3091		48 57 9 3082		50 25 41 3073	
	Spica ♀ W.	39 48 4 3021		41 17 51 3013		42 47 48 3006		44 17 54 2998	
	Mars W.	32 13 57 3273		33 38 40 3264		35 3 34 3255		36 28 38 3245	
	α Aquilæ E.	65 28 41 3998		64 17 0 4016		63 5 36 4036		61 54 32 4057	
	Fomalhaut E.	88 23 38 3282		86 59 5 3275		85 34 24 3269		84 9 36 3262	
18	Sun W.	108 6 32 3308		109 30 34 3295		110 54 51 3284		112 19 21 3271	
	Venus W.	64 37 22 3218		66 3 10 3206		67 29 12 3194		68 55 29 3181	
	Jupiter W.	57 51 13 3023		59 20 57 3012		60 50 55 3000		62 21 8 2989	
	Spica ♀ W.	51 51 9 2950		53 22 25 2939		54 53 54 2928		56 25 37 2916	
	Mars W.	43 36 58 3192		45 3 17 3180		46 29 50 3168		47 56 37 3156	
	Fomalhaut E.	77 3 36 3227		75 37 59 3221		74 12 15 3214		72 46 22 3207	
	α Pegasi E.	99 3 59 3194		97 37 42 3181		96 11 10 3169		94 44 24 3156	
19	Sun W.	119 25 40 3204		120 51 44 3189		122 18 6 3175		123 44 45 3159	
	Venus W.	76 10 55 3111		77 38 51 3096		79 7 6 3081		80 35 39 3065	
	Jupiter W.	69 56 2 2924		71 27 50 2911		72 59 55 2897		74 32 18 2882	
	Spica ♀ W.	64 8 3 2853		65 41 22 2841		67 14 57 2827		68 48 50 2813	
	Mars W.	55 14 27 3089		56 42 50 3074		58 11 31 3060		59 40 30 3044	
	Fomalhaut E.	65 35 6 3178		64 8 30 3173		62 41 49 3169		61 15 3 3165	
	α Pegasi E.	87 26 44 3094		85 58 27 3081		84 29 54 3068		83 1 5 3056	
20	Sun W.	131 2 42 3081		132 31 15 3065		134 0 8 3048		135 29 22 3031	
	Venus W.	88 3 19 2984		89 33 52 2967		91 4 46 2950		92 36 2 2933	
	Jupiter W.	82 18 55 2808		83 53 13 2793		85 27 50 2777		87 2 48 2761	
	Mars W.	67 10 7 2967		68 41 1 2951		70 12 15 2935		71 43 49 2919	
	Saturn W.	35 11 14 2837		36 44 54 2815		38 19 2 2795		39 53 37 2774	
	Fomalhaut E.	54 0 29 3162		52 33 35 3166		51 6 45 3171		49 40 1 3178	
	α Pegasi E.	75 33 19 2997		74 3 2 2985		72 32 31 2975		71 1 47 2965	
21	Venus W.	100 17 46 2847		101 51 13 2829		103 25 3 2811		104 59 16 2795	
	Jupiter W.	95 2 50 2683		96 39 53 2666		98 17 18 2651		99 55 4 2635	
	Mars W.	79 26 53 2837		81 0 33 2820		82 34 35 2804		84 8 58 2787	
	Saturn W.	47 53 7 2677		49 30 18 2659		51 7 53 2641		52 45 52 2623	
	Antares W.	43 44 23 2615		45 22 58 2599		47 1 54 2583		48 41 12 2567	
	Fomalhaut E.	42 29 35 3258		41 4 34 3287		39 40 7 3321		38 16 20 3362	
	α Pegasi E.	63 25 8 2922		61 53 17 2916		60 21 18 2911		58 49 13 2907	
22	Venus W.	112 55 54 2711		114 33 20 2693		116 9 9 2677		117 46 20 2662	
	Jupiter W.	108 9 13 2558		109 49 6 2543		111 29 19 2528		113 9 53 2514	
	Mars W.	92 6 15 2707		93 42 46 2691		95 19 38 2676		96 56 50 2661	
	Saturn W.	61 1 48 2538		62 42 9 2522		64 22 52 2506		66 3 57 2490	
	Antares W.	57 3 5 2490		58 44 32 2475		60 26 20 2460		62 8 29 2446	
	α Pegasi E.	51 8 9 2910		49 36 3 2916		48 4 5 2926		46 32 19 2939	

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
22	<i>a</i> Arietis E.	97 57 31	2575	96 18 2	2560	94 38 12	2544	92 58 0	2529
23	Mars W.	98 34 23	2646	100 12 16	2631	101 50 29	2617	103 29 1	2602
	Saturn W.	67 45 24	2475	69 27 12	2460	71 9 22	2445	72 51 52	2431
	Antares W.	63 50 58	2431	65 33 48	2417	67 16 58	2404	69 0 27	2389
	<i>a</i> Pegasi E.	45 0 49	2954	43 29 39	2974	41 58 54	2999	40 28 40	3030
	<i>a</i> Arietis E.	84 31 44	2455	82 49 27	2441	81 6 51	2427	79 23 55	2414
24	Mars W.	111 46 22	2538	113 26 43	2526	115 7 20	2515	116 48 13	2504
	Saturn W.	81 29 14	2366	83 13 38	2355	84 58 18	2344	86 43 14	2332
	Antares W.	77 42 41	2326	79 28 2	2315	81 13 39	2304	82 59 33	2293
	<i>a</i> Arietis E.	70 44 41	2353	68 59 58	2342	67 15 0	2331	65 29 46	2322
	Aldebaran E.	101 57 45	2405	100 14 18	2393	98 30 33	2381	96 46 31	2370
25	Saturn W.	95 31 39	2285	97 18 0	2278	99 4 32	2270	100 51 15	2264
	Antares W.	91 52 47	2246	93 40 6	2238	95 27 37	2231	97 15 19	2223
	<i>a</i> Arietis E.	56 40 17	2280	54 53 48	2273	53 7 9	2268	51 20 22	2262
	Aldebaran E.	88 2 33	2322	86 17 6	2314	84 31 27	2307	82 45 38	2300
26	Saturn W.	109 47 0	2239	111 34 30	2235	113 22 5	2233	115 9 44	2231
	<i>a</i> Aquilæ W.	58 58 42	2301	60 22 52	2258	61 47 53	2218	63 13 41	2182
	<i>a</i> Arietis E.	42 24 52	2248	40 37 36	2247	38 50 19	2249	37 3 4	2251
	Aldebaran E.	73 54 27	2278	72 7 55	2275	70 21 19	2273	68 34 40	2272
27	<i>a</i> Aquilæ W.	70 32 9	3050	72 1 20	3031	73 30 54	3015	75 0 48	3001
	Fomalhaut W.	42 39 47	2773	44 14 50	2735	45 50 44	2701	47 27 23	2672
	<i>a</i> Arietis E.	28 8 24	2288	26 22 7	2303	24 36 12	2322	22 50 45	2347
	Aldebaran E.	59 41 28	2279	57 54 58	2283	56 8 33	2287	54 22 15	2293
	Pollux E.	102 24 30	2178	100 35 29	2178	98 46 28	2178	96 57 27	2178
28	<i>a</i> Aquilæ W.	82 33 44	2963	84 4 43	2961	85 35 45	2961	87 6 47	2962
	Fomalhaut W.	55 39 1	2572	57 18 34	2559	58 58 25	2548	60 38 31	2540
	<i>a</i> Pegasi W.	34 47 17	2984	36 17 50	2921	37 49 42	2866	39 22 44	2819
	Aldebaran E.	45 33 27	2340	43 48 26	2354	42 3 45	2369	40 19 26	2387
	Pollux E.	87 52 44	2187	86 3 57	2190	84 15 14	2193	82 26 36	2196
	Sun E.	131 36 17	2482	129 54 39	2486	128 13 6	2490	126 31 38	2493
29	Fomalhaut W.	69 1 26	2516	70 42 17	2515	72 23 9	2515	74 4 1	2515
	<i>a</i> Pegasi W.	47 20 37	2668	48 58 0	2649	50 35 49	2633	52 13 59	2620
	Aldebaran E.	31 45 23	2520	30 4 38	2560	28 24 48	2608	26 46 4	2664
	Pollux E.	73 24 56	2220	71 36 58	2225	69 49 8	2231	68 1 26	2237
	Sun E.	118 5 45	2517	116 24 56	2522	114 44 14	2529	113 3 42	2535
30	Fomalhaut W.	82 27 44	2532	84 8 13	2537	85 48 35	2543	87 28 48	2550
	<i>a</i> Pegasi W.	60 28 27	2581	62 7 48	2578	63 47 13	2577	65 26 40	2575
	<i>a</i> Arietis W.	16 51 1	2533	18 31 28	2495	20 12 49	2467	21 54 48	2448
	Pollux E.	59 5 20	2270	57 18 37	2278	55 32 5	2285	53 45 43	2293
	Sun E.	104 43 15	2570	103 3 39	2577	101 24 13	2586	99 44 59	2593
31	Fomalhaut W.	95 47 21	2592	97 26 27	2602	99 5 19	2613	100 43 57	2624
	<i>a</i> Pegasi W.	73 43 51	2584	75 23 8	2588	77 2 20	2592	78 41 26	2598
	<i>a</i> Arietis W.	30 29 23	2413	32 12 39	2413	33 55 55	2414	35 39 10	2416
	Pollux E.	44 56 48	2333	43 11 37	2341	41 26 38	2350	39 41 51	2359
	Sun E.	91 31 29	2635	89 53 21	2643	88 15 25	2652	86 37 40	2661

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Midnight.			P.L. of Diff.			XVh.			P.L. of Diff.			XVIIIh.			P.L. of Diff.			XXIh.			P.L. of Diff.		
			°	'	''	°	'	''	°	'	''	°	'	''	°	'	''	°	'	''	°	'	''	°	'	''
22	<i>α</i> Arietis	E.	91	17	27	2513			89	36	32	2499			87	55	17	2484			86	13	41	2469		
23	Mars	W.	105	7	53	2589			106	47	3	2576			108	26	31	2562			110	6	18	2550		
	Saturn	W.	74	34	42	2417			76	17	52	2404			78	1	21	2391			79	45	8	2378		
	Antares	W.	70	44	17	2376			72	28	26	2364			74	12	53	2351			75	57	38	2339		
	<i>α</i> Pegasi	E.	38	59	4	3066			37	30	13	3110			36	2	16	3163			34	35	23	3226		
	<i>α</i> Arietis	E.	77	40	40	2401			75	57	7	2389			74	13	16	2376			72	29	7	2364		
24	Mars	W.	118	29	21	2494			120	10	43	2483			121	52	20	2474			123	34	10	2465		
	Saturn	W.	88	28	27	2322			90	13	54	2312			91	59	36	2303			93	45	31	2294		
	Antares	W.	84	45	43	2283			86	32	8	2273			88	18	47	2264			90	5	40	2254		
	<i>α</i> Arietis	E.	63	44	18	2313			61	58	37	2303			60	12	42	2295			58	26	35	2287		
	Aldebaran	E.	95	2	13	2359			93	17	39	2349			91	32	51	2339			89	47	49	2330		
25	Saturn	W.	102	38	7	2258			104	25	9	2252			106	12	19	2247			107	59	37	2243		
	Antares	W.	99	3	12	2216			100	51	16	2210			102	39	28	2204			104	27	49	2200		
	<i>α</i> Arietis	E.	49	33	27	2257			47	46	25	2254			45	59	18	2251			44	12	6	2249		
	Aldebaran	E.	80	59	39	2294			79	13	31	2289			77	27	16	2285			75	40	54	2281		
26	Saturn	W.	116	57	26	2229			118	45	10	2230			120	32	53	2229			122	20	37	2228		
	<i>α</i> Aquilæ	W.	64	40	12	3150			66	7	21	3120			67	35	6	3094			69	3	23	3070		
	<i>α</i> Arietis	E.	35	15	52	2255			33	28	46	2260			31	41	47	2267			29	54	59	2276		
	Aldebaran	E.	66	48	0	2272			65	1	20	2272			63	14	40	2274			61	28	2	2277		
27	<i>α</i> Aquilæ	W.	76	30	59	2989			78	1	25	2981			79	32	2	2973			81	2	49	2966		
	Fomalhaut	W.	49	4	41	2646			50	42	34	2623			52	20	58	2604			53	59	48	2587		
	Arietis	E.	21	5	54	2379			19	21	49	2420			17	38	43	2477			15	56	57	2553		
	Aldebaran	E.	52	36	6	2300			50	50	7	2309			49	4	20	2318			47	18	46	2328		
	Pollux	E.	95	8	26	2179			93	19	27	2180			91	30	30	2182			89	41	35	2184		
28	<i>α</i> Aquilæ	W.	88	37	48	2964			90	8	46	2968			91	39	39	2974			93	10	24	2982		
	Fomalhaut	W.	62	18	49	2532			63	59	18	2526			65	39	55	2522			67	20	38	2518		
	<i>α</i> Pegasi	W.	40	56	47	2779			42	31	42	2744			44	7	23	2715			45	43	43	2689		
	Aldebaran	E.	38	35	32	2407			36	52	7	2429			35	9	14	2455			33	26	58	2484		
	Pollux	E.	80	38	3	2200			78	49	36	2204			77	1	15	2210			75	13	2	2215		
	Sun	E.	124	50	15	2497			123	8	58	2501			121	27	46	2507			119	46	42	2512		
29	Fomalhaut	W.	75	44	53	2517			77	25	42	2520			79	6	27	2523			80	47	8	2527		
	<i>α</i> Pegasi	W.	53	52	27	2608			55	31	11	2599			57	10	7	2592			58	49	13	2586		
	Aldebaran	E.	25	8	35	2732			23	32	38	2814			21	58	29	2916			20	26	31	3046		
	Pollux	E.	66	13	54	2243			64	26	31	2249			62	39	17	2257			60	52	14	2263		
	Sun	E.	111	23	18	2542			109	43	3	2548			108	2	57	2556			106	23	1	2563		
30	Fomalhaut	W.	89	8	52	2557			90	48	46	2564			92	28	30	2573			94	8	2	2583		
	<i>α</i> Pegasi	W.	67	6	9	2575			68	45	38	2577			70	25	5	2578			72	4	30	2581		
	<i>α</i> Arietis	W.	23	37	15	2434			25	20	1	2424			27	3	1	2419			28	46	9	2415		
	Pollux	E.	51	59	33	2300			50	13	34	2309			48	27	47	2316			46	42	11	2325		
	Sun	E.	98	5	55	2601			96	27	1	2610			94	48	19	2618			93	9	48	2627		
31	Fomalhaut	W.	102	22	19	2636			104	0	25	2648			105	38	15	2661			107	15	47	2675		
	<i>α</i> Pegasi	W.	80	20	24	2603			81	59	15	2609			83	37	58	2615			85	16	32	2623		
	<i>α</i> Arietis	W.	37	22	22	2419			39	5	29	2423			40	48	31	2428			42	31	26	2432		
	Pollux	E.	37	57	18	2368			36	12	57	2377			34	28	49	2386			32	44	54	2396		
	Sun	E.	85	0	8	2669			83	22	47	2678			81	45	38	2687			80	8	41	2696		

## AT APPARENT NOON.

MEAN  
TIME.

Day of the Week.	Day of the Month.	THE SUN'S						Equation of Time, to be sub. fm. Apparent Time.		THE MOON'S	
		Apparent Rt. Ascen.	Diff. for 1 h.	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.	Diff. for 1 h.	Age.	Meri- dian Pas- sage.		
		h m s	s	° ' "	"	' "	m s	s	d	h m	
Sun.	1	10 39 51.55	9.1	N. 8 27 29.5	54.5	15 52.7	0 0.25	0.779	23.1	19 21	
Mo.	2	10 43 29.36	9.1	8 5 41.2	54.9	15 52.9	0 18.95	0.790	24.1	20 21	
Tu.	3	10 47 6.90	9.1	7 43 44.8	55.2	15 53.1	0 37.92	0.801	25.1	21 17	
We.	4	10 50 44.18	9.0	7 21 40.9	55.5	15 53.4	0 57.14	0.811	26.1	22 9	
Th.	5	10 54 21.22	9.0	6 59 29.6	55.8	15 53.6	1 16.60	0.820	27.1	22 56	
Fri.	6	10 57 58.03	9.0	6 37 11.4	56.0	15 53.8	1 36.29	0.829	28.1	23 40	
Sat.	7	11 1 34.63	9.0	6 14 46.7	56.3	15 54.1	1 56.19	0.837	29.1	♂	
Sun.	8	11 5 11.03	9.0	5 52 15.6	56.5	15 54.3	2 16.28	0.845	0.6	0 22	
Mo.	9	11 8 47.26	9.0	5 29 38.7	56.8	15 54.6	2 36.55	0.852	1.6	1 2	
Tu.	10	11 12 23.31	9.0	5 6 56.2	57.0	15 54.8	2 56.99	0.858	2.6	1 42	
We.	11	11 15 59.22	9.0	4 44 8.5	57.2	15 55.1	3 17.58	0.863	3.6	2 23	
Th.	12	11 19 34.99	9.0	4 21 16.1	57.4	15 55.3	3 38.30	0.868	4.6	3 6	
Fri.	13	11 23 10.65	9.0	3 58 19.2	57.6	15 55.6	3 59.13	0.872	5.6	3 51	
Sat.	14	11 26 46.22	9.0	3 35 18.1	57.7	15 55.9	4 20.06	0.876	6.6	4 40	
Sun.	15	11 30 21.71	9.0	3 12 13.2	57.9	15 56.1	4 41.08	0.878	7.6	5 31	
Mo.	16	11 33 57.13	9.0	2 49 4.9	58.0	15 56.4	5 2.16	0.880	8.6	6 24	
Tu.	17	11 37 32.51	9.0	2 25 53.4	58.1	15 56.7	5 23.27	0.881	9.6	7 18	
We.	18	11 41 7.87	9.0	2 2 39.2	58.2	15 56.9	5 44.42	0.881	10.6	8 12	
Th.	19	11 44 43.23	9.0	1 39 22.6	58.3	15 57.2	6 5.56	0.880	11.6	9 5	
Fri.	20	11 48 18.61	0.0	1 16 3.9	58.4	15 57.5	6 26.67	0.878	12.6	9 56	
Sat.	21	11 51 54.04	9.0	0 52 43.3	58.4	15 57.8	6 47.74	0.875	13.6	10 46	
Sun.	22	11 55 29.53	9.0	0 29 21.2	58.5	15 58.0	7 8.74	0.871	14.6	11 36	
Mo.	23	11 59 5.11	9.0	N. 0 5 57.9	58.5	15 58.3	7 29.65	0.866	15.6	12 26	
Tu.	24	12 2 40.82	9.0	S. 0 17 26.3	58.5	15 58.6	7 50.43	0.860	16.6	13 18	
We.	25	12 6 16.66	9.0	0 40 51.0	58.6	15 58.8	8 11.08	0.853	17.6	14 13	
Th.	26	12 9 52.68	9.0	1 4 16.1	58.6	15 59.1	8 31.56	0.845	18.6	15 11	
Fri.	27	12 13 28.89	9.0	1 27 41.2	58.5	15 59.4	8 51.85	0.837	19.6	16 13	
Sat.	28	12 17 5.31	9.0	1 51 5.8	58.5	15 59.7	9 11.93	0.827	20.6	17 15	
Sun.	29	12 20 41.97	9.0	2 14 29.8	58.5	15 59.9	9 31.78	0.816	21.6	18 16	
Mo.	30	12 24 18.89	9.1	2 37 52.8	58.4	16 0.2	9 51.37	0.804	22.6	19 13	
Tu.	31	12 27 56.09		S. 3 1 14.3		16 0.5	10 10.67		23.6	20 6	

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.	THE MOON'S							
		Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		° ' "	° ' "	° ' "	° ' "	h m s	h m s	° ' "	° ' "
Sun.	1	15 57.7	15 53.6	58 34.4	58 19.5	5 13 57	5 45 19	28 19 28N.	28 36 26N.
Mo.	2	15 49.5	15 45.3	58 4.3	57 48.9	6 16 29	6 47 11	28 26 28	27 50 26
Tu.	3	15 41.1	15 36.9	57 33.6	57 18.3	7 17 12	7 46 22	26 49 51	25 26 45
We.	4	15 32.7	15 28.6	57 2.9	56 47.6	8 14 33	8 41 45	23 43 29	21 42 37
Th.	5	15 24.5	15 20.4	56 32.5	56 17.5	9 7 55	9 33 9	19 26 46	16 58 28
Fri.	6	15 16.3	15 12.4	56 2.7	55 48.3	9 57 30	10 21 5	14 20 12	11 34 14
Sat.	7	15 8.6	15 4.9	55 34.2	55 20.6	10 44 0	11 6 23	8 42 43	5 47 36N.
Sun.	8	15 1.3	14 57.2	55 7.5	54 55.2	11 28 21	11 50 1	2 50 42N.	0 6 19S.
Mo.	9	14 54.9	14 52.1	54 44.0	54 33.8	12 11 32	12 33 0	3 1 55S.	5 54 38
Tu.	10	14 49.6	14 47.6	54 24.7	54 17.2	12 54 33	13 16 17	8 43 5	11 25 54
We.	11	14 45.9	14 44.8	54 11.1	54 6.8	13 38 18	14 0 43	14 1 48	16 29 26
Th.	12	14 44.1	14 44.0	54 4.4	54 4.1	14 23 36	14 47 4	18 47 27	20 54 31
Fri.	13	14 44.5	14 45.7	54 6.0	54 10.2	15 11 9	15 35 54	23 49 11	24 30 0
Sat.	14	14 47.4	14 49.9	54 16.7	54 25.7	16 1 20	16 27 26	25 55 31	27 4 16
Sun.	15	14 53.1	14 56.9	54 37.4	54 51.3	16 54 9	17 21 26	27 54 53	28 26 3
Mo.	16	15 1.4	15 6.6	55 7.8	55 27.0	17 49 8	18 17 9	28 36 42	28 25 58
Tu.	17	15 12.4	15 18.7	55 48.2	56 11.4	18 45 19	19 13 31	27 53 21	26 58 38
We.	18	15 25.5	15 32.6	56 36.2	57 2.5	19 41 31	20 9 23	25 42 0	24 4 3
Th.	19	15 40.0	15 47.5	57 29.6	57 57.1	20 36 53	21 4 1	22 5 41	19 48 11
Fri.	20	15 55.0	16 2.2	58 24.5	58 51.2	21 30 46	21 57 11	17 13 7	14 22 23
Sat.	21	16 9.1	16 15.4	59 16.4	59 39.5	22 23 18	22 49 13	11 18 3	8 2 33
Sun.	22	16 21.0	16 25.8	60 0.1	60 17.7	23 15 3	23 40 54	4 38 29S.	1 8 42S.
Mo.	23	16 29.6	16 32.3	60 31.4	60 41.4	0 6 55	0 33 13	2 23 47N.	5 55 43N.
Tu.	24	16 33.8	16 34.2	60 47.1	60 48.6	0 59 58	1 27 17	9 23 41	12 44 14
We.	25	16 33.5	16 31.8	60 46.0	60 39.5	1 55 17	2 24 2	15 53 47	18 48 49
Th.	26	16 29.0	16 25.3	60 29.3	60 15.7	2 53 35	3 23 54	21 25 57	23 42 2
Fri.	27	16 20.9	16 15.9	59 59.6	59 41.1	3 54 55	4 26 29	25 34 21	27 0 40
Sat.	28	16 10.3	16 4.5	59 20.8	58 59.5	4 58 21	5 30 17	27 59 31	28 30 12
Sun.	29	15 58.5	15 53.8	58 37.6	58 15.4	6 2 0	6 33 13	28 32 52	28 8 27
Mo.	30	15 46.5	15 40.0	57 53.3	57 31.8	7 3 42	7 33 16	27 18 34N.	26 5 21N.
Tu.	31	15 34.9	15 29.5	57 10.9	56 50.9				

117  
5  
106

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	<i>a</i> Pegasi W.	86 54 56	2631	88 33 9	2639	90 11 11	2646	91 49 3	2655
	<i>a</i> Arietis W.	44 14 15	2438	45 56 56	2443	47 39 29	2450	49 21 53	2455
	Aldebaran W.	16 18 35	3520	17 38 37	3331	19 2 13	3190	20 28 34	3081
	Pollux E.	31 1 14	2405	29 17 47	2415	27 34 34	2426	25 51 36	2437
	Sun E.	78 31 56	2705	76 55 23	2714	75 19 1	2723	73 42 52	2732
2	<i>a</i> Arietis W.	57 51 36	2490	59 33 3	2497	61 14 20	2505	62 55 26	2513
	Aldebaran W.	28 5 27	2806	29 39 47	2780	31 14 41	2760	32 50 2	2743
	Sun E.	65 45 6	2777	64 10 8	2787	62 35 23	2795	61 0 49	2805
3	<i>a</i> Arietis W.	71 18 16	2552	72 58 17	2560	74 38 7	2568	76 17 46	2576
	Aldebaran W.	40 50 54	2702	42 27 31	2701	44 4 10	2699	45 40 51	2698
	Sun E.	53 11 1	2851	51 37 39	2859	50 4 28	2869	48 31 30	2878
4	<i>a</i> Arietis W.	84 33 12	2618	86 11 43	2627	87 50 2	2635	89 28 10	2643
	Aldebaran W.	53 43 58	2710	55 20 25	2714	56 56 46	2719	58 33 1	2724
	Pollux W.	9 56 29	2702	11 33 6	2684	13 10 8	2675	14 47 21	2671
	Sun E.	40 49 32	2924	39 17 44	2934	37 46 8	2943	36 14 43	2952
5	Aldebaran W.	66 32 29	2753	68 7 58	2760	69 43 19	2766	71 18 31	2774
	Pollux W.	22 53 35	2686	24 30 34	2693	26 7 24	2699	27 44 6	2706
9	Saturn E.	60 45 37	3003	59 15 28	3013	57 45 31	3022	56 15 45	3031
	Antares E.	63 37 43	2945	62 6 21	2952	60 35 8	2960	59 4 5	2968
10	Sun W.	28 58 42	3368	30 21 35	3375	31 44 20	3382	33 6 57	3389
	Saturn E.	48 49 50	3078	47 21 13	3087	45 52 48	3096	44 24 34	3106
	Antares E.	51 31 10	3004	50 1 2	3010	48 31 2	3016	47 1 9	3022
	<i>a</i> Aquilæ E.	103 8 22	3816	101 53 36	3814	100 38 48	3812	99 23 58	3811
11	Sun W.	39 58 14	3417	41 20 11	3423	42 42 1	3427	44 3 47	3431
	Saturn E.	37 6 23	3157	35 39 22	3168	34 12 34	3180	32 46 1	3193
	Antares E.	39 33 34	3049	38 4 22	3054	36 35 16	3058	35 6 15	3062
	<i>a</i> Aquilæ E.	93 9 51	3819	91 55 8	3821	90 40 27	3824	89 25 50	3828
12	Sun W.	50 51 31	3447	52 12 54	3449	53 34 15	3451	54 55 34	3452
	Jupiter W.	19 58 37	3238	21 24 1	3230	22 49 35	3222	24 15 18	3216
	Venus W.	19 57 21	3188	21 23 45	3181	22 50 18	3173	24 17 0	3165
	Saturn E.	25 37 25	3275	24 12 44	3299	22 48 31	3326	21 24 50	3359
	Antares E.	27 42 15	3077	26 13 37	3079	24 45 2	3080	23 16 28	3082
	<i>a</i> Aquilæ E.	83 14 1	3858	81 59 59	3865	80 46 4	3873	79 32 17	3883
13	Sun W.	61 42 0	3451	63 3 19	3449	64 24 40	3447	65 46 3	3445
	Venus W.	31 32 23	3137	32 59 48	3132	34 27 19	3126	35 54 57	3120
	Jupiter W.	31 25 30	3192	32 51 49	3188	34 18 13	3183	35 44 42	3178
	<i>a</i> Aquilæ E.	73 25 50	3935	72 13 6	3948	71 0 35	3962	69 48 18	3976
	Fomalhaut E.	97 34 11	3345	96 10 52	3343	94 47 30	3339	93 24 4	3336
14	Sun W.	72 33 51	3424	73 55 40	3420	75 17 34	3414	76 39 35	3407
	Venus W.	43 15 0	3087	44 43 26	3078	46 12 2	3071	47 40 47	3063
	Jupiter W.	42 58 37	3152	44 25 44	3146	45 52 58	3138	47 20 21	3132
	Mars W.	16 35 52	3418	17 57 48	3398	19 20 7	3380	20 42 46	3365
	Fomalhaut E.	86 25 57	3319	85 2 7	3315	83 38 13	3311	82 14 14	3307
	<i>a</i> Pegasi E.	108 29 32	3322	107 5 46	3311	105 41 47	3301	104 17 36	3292
15	Sun W.	83 31 43	3367	84 54 37	3358	86 17 42	3347	87 40 59	3337

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Midnight.			P.L. of Diff.	XVh.			P.L. of Diff.	XVIIIh.			P.L. of Diff.	XXIh.			P.L. of Diff.
			°	'	"		°	'	"		°	'	"		°	'	"	
1	$\alpha$ Pegasi	W.	93	26	43	2665	95	4	10	2675	96	41	24	2685	98	18	24	2696
	$\alpha$ Arietis	W.	51	4	9	2462	52	46	15	2469	54	28	12	2476	56	9	59	2483
	Aldebaran	W.	21	57	7	2997	23	27	24	2931	24	59	4	2880	26	31	49	2838
	Pollux	E.	24	8	54	2448	22	26	27	2460	20	44	18	2473	19	2	26	2487
	Sun	E.	72	6	55	2741	70	31	10	2750	68	55	36	2759	67	20	15	2769
2	$\alpha$ Arietis	W.	64	36	21	2520	66	17	6	2528	67	57	40	2536	69	38	3	2543
	Aldebaran	W.	34	25	45	2730	36	1	45	2720	37	37	59	2712	39	14	23	2707
	Sun	E.	59	26	28	2814	57	52	18	2824	56	18	21	2832	54	44	35	2841
3	$\alpha$ Arietis	W.	77	57	14	2585	79	36	30	2592	81	15	36	2601	82	54	29	2609
	Aldebaran	W.	47	17	33	2700	48	54	13	2701	50	30	52	2704	52	7	27	2707
	Sun	E.	46	58	43	2887	45	26	7	2897	43	53	44	2905	42	21	32	2915
4	$\alpha$ Arietis	W.	91	6	7	2652	92	43	51	2661	94	21	24	2669	95	58	45	2678
	Aldebaran	W.	60	9	9	2729	61	45	11	2735	63	21	5	2741	64	56	51	2747
	Pollux	W.	16	24	40	2670	18	2	0	2673	19	39	16	2675	21	16	29	2680
	Sun	E.	34	43	30	2961	33	12	29	2971	31	41	40	2980	30	11	2	2989
5	Aldebaran	W.	72	53	33	2782	74	28	25	2789	76	3	8	2797	77	37	40	2805
	Pollux	W.	29	20	38	2713	30	57	1	2720	32	33	14	2728	34	9	16	2736
9	Saturn	E.	54	46	11	3041	53	16	49	3050	51	47	38	3059	50	18	38	3069
	Antares	E.	57	33	12	2975	56	2	28	2982	54	31	53	2989	53	1	27	2997
10	Sun	W.	34	29	26	3395	35	51	48	3401	37	14	3	3407	38	36	12	3413
	Saturn	E.	42	56	32	3115	41	28	41	3126	40	1	3	3136	38	33	37	3146
	Antares	E.	45	31	24	3028	44	1	46	3034	42	32	16	3039	41	2	52	3044
	$\alpha$ Aquilæ	E.	98	9	7	3812	96	54	17	3812	95	39	27	3813	94	24	38	3815
11	Sun	W.	45	25	28	3436	46	47	4	3439	48	8	36	3442	49	30	5	3445
	Saturn	E.	31	19	43	3206	29	53	41	3220	28	27	56	3236	27	2	30	3254
	Antares	E.	33	37	19	3066	32	8	28	3069	30	39	40	3072	29	10	56	3074
	$\alpha$ Aquilæ	E.	88	11	17	3833	86	56	49	3839	85	42	27	3845	84	28	11	3851
12	Sun	W.	56	16	52	3453	57	38	9	3453	58	59	26	3453	60	20	43	3453
	Jupiter	W.	25	41	8	3210	27	7	5	3205	28	33	8	3201	29	59	16	3196
	Venus	W.	25	43	51	3159	27	10	49	3153	28	37	54	3148	30	5	5	3143
	Saturn	E.	20	1	47	3398	18	39	28	3448	17	18	6	3511	15	57	54	3590
	Antares	E.	21	47	56	3083	20	19	28	3083	18	50	55	3083	17	22	25	3083
	$\alpha$ Aquilæ	E.	78	18	40	3892	77	5	12	3902	75	51	54	3912	74	38	46	3924
13	Sun	W.	67	7	29	3442	68	28	58	3439	69	50	31	3434	71	12	9	3430
	Venus	W.	37	22	42	3114	38	50	35	3108	40	18	35	3101	41	46	43	3094
	Jupiter	W.	37	11	17	3173	38	37	58	3169	40	4	44	3163	41	31	37	3157
	$\alpha$ Aquilæ	E.	68	36	15	3992	67	24	28	4010	66	12	58	4029	65	1	47	4047
	Fomalhaut	E.	92	0	34	3333	90	37	1	3330	89	13	24	3326	87	49	42	3323
14	Sun	W.	78	1	44	3400	79	24	0	3393	80	46	25	3385	82	8	59	3376
	Venus	W.	49	9	42	3053	50	38	49	3044	52	8	7	3035	53	37	37	3025
	Jupiter	W.	48	47	52	3125	50	15	31	3117	51	43	20	3109	53	11	19	3100
	Mars	W.	22	5	43	3349	23	28	58	3335	24	52	29	3322	26	16	15	3309
	Fomalhaut	E.	80	50	10	3303	79	26	2	3298	78	1	48	3294	76	37	29	3290
	$\alpha$ Pegasi	E.	102	53	15	3282	101	28	43	3272	100	3	59	3263	98	39	4	3253
15	Sun	W.	89	4	28	3326	90	28	9	3314	91	52	4	3303	93	16	12	3290

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
15	Venus W.	55 7 19	3014	56 37 14	3003	58 7 23	2992	59 37 46	2981
	Jupiter W.	54 39 29	3091	56 7 50	3082	57 36 22	3072	59 5 6	3061
	Mars W.	27 40 16	3296	29 4 33	3283	30 29 4	3271	31 53 50	3258
	Fomalhaut E.	75 13 6	3285	73 48 37	3281	72 24 3	3277	70 59 21	3272
	α Pegasi E.	97 13 58	3243	95 48 40	3233	94 23 10	3222	92 57 27	3213
16	Sun W.	94 40 35	3277	96 5 13	3264	97 30 7	3251	98 55 16	3236
	Venus W.	67 13 31	2916	68 45 30	2901	70 17 47	2887	71 50 22	2872
	Jupiter W.	66 32 7	3004	68 2 15	2991	69 32 39	2978	71 3 19	2965
	Mars W.	39 1 32	3190	40 27 53	3176	41 54 31	3162	43 21 26	3147
	Saturn W.	23 39 25	3126	25 7 3	3095	26 35 19	3065	28 4 12	3037
	Antares W.	20 1 6	2920	21 32 59	2908	23 5 8	2895	24 37 34	2882
	Fomalhaut E.	63 54 57	3253	62 29 51	3250	61 4 41	3248	59 39 29	3247
	α Pegasi E.	85 45 49	3159	84 18 51	3148	82 51 39	3137	81 24 14	3126
17	Sun W.	106 5 27	3159	107 32 25	3142	108 59 44	3126	110 27 22	3108
	Venus W.	79 38 16	2792	81 12 54	2776	82 47 53	2759	84 23 15	2741
	Jupiter W.	78 41 6	2892	80 13 35	2876	81 46 25	2860	83 19 35	2843
	Mars W.	50 40 41	3067	52 9 31	3051	53 38 40	3034	55 8 11	3016
	Saturn W.	35 36 33	2919	37 8 28	2897	38 40 51	2876	40 13 40	2856
	Antares W.	32 24 7	2810	33 58 22	2795	35 32 57	2779	37 7 53	2763
	Fomalhaut E.	52 33 16	3251	51 8 7	3256	49 43 4	3262	48 18 8	3271
	α Pegasi E.	74 3 47	3070	72 35 1	3060	71 6 2	3049	69 36 50	3039
18	Sun W.	117 50 56	3018	119 20 46	3000	120 50 59	2981	122 21 36	2962
	Venus W.	92 25 57	2651	94 3 43	2632	95 41 54	2613	97 20 31	2595
	Jupiter W.	91 10 48	2759	92 46 10	2741	94 21 55	2724	95 58 3	2705
	Mars W.	62 41 14	2927	64 12 59	2909	65 45 7	2889	67 17 40	2871
	Saturn W.	48 4 25	2754	49 39 53	2734	51 15 48	2714	52 52 9	2695
	Antares W.	45 7 57	2679	46 45 5	2662	48 22 36	2643	50 0 32	2626
	Fomalhaut E.	41 17 6	3359	39 54 3	3390	38 31 35	3427	37 9 49	3471
	α Pegasi E.	62 7 49	2993	60 37 28	2987	59 6 59	2981	57 36 22	2975
19	Sun W.	130 0 44	2865	131 33 48	2845	133 7 17	2826	134 41 11	2806
	Venus W.	105 40 4	2500	107 21 18	2480	109 2 59	2461	110 45 7	2443
	Jupiter W.	104 4 47	2615	105 43 22	2597	107 22 21	2579	109 1 45	2560
	Mars W.	75 6 29	2775	76 41 30	2756	78 16 56	2737	79 52 47	2717
	Saturn W.	61 0 32	2596	62 39 32	2577	64 18 59	2557	65 58 53	2538
	Antares W.	58 16 15	2536	59 56 38	2517	61 37 27	2499	63 18 41	2482
	α Pegasi E.	50 2 9	2970	48 31 19	2975	47 0 35	2983	45 30 1	2994
	α Arietis E.	90 5 2	2559	88 25 10	2541	86 44 54	2522	85 4 12	2504
20	Mars W.	87 58 25	2624	89 36 48	2605	91 15 36	2587	92 54 49	2569
	Saturn W.	74 24 57	2445	76 7 27	2427	77 50 23	2409	79 33 45	2391
	Antares W.	71 51 13	2392	73 35 0	2375	75 19 11	2357	77 3 48	2340
	α Pegasi E.	38 2 15	3116	36 34 25	3161	35 7 29	3215	33 41 38	3281
	α Arietis E.	76 34 27	2416	74 51 15	2399	73 7 39	2382	71 23 39	2366
21	Mars W.	101 16 53	2485	102 58 27	2470	104 40 23	2455	106 22 40	2440
	Saturn W.	88 16 38	2310	90 2 23	2295	91 48 30	2281	93 31 58	2266
	Antares W.	85 52 54	2260	87 39 53	2244	89 27 15	2230	91 14 58	2215
	α Arietis E.	62 37 53	2289	60 51 37	2276	59 5 2	2262	57 18 6	2249
	Aldebaran E.	93 56 28	2335	92 11 20	2320	90 25 50	2305	88 39 58	2291

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Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
15	Venus W.	61 8 23	2968	62 39 16	2955	64 10 25	2943	65 41 50	2930
	Jupiter W.	60 34 3	3051	62 3 13	3040	63 32 36	3028	65 2 14	3016
	Mars W.	33 18 51	3244	34 44 8	3231	36 9 40	3218	37 35 28	3204
	Fomalhaut E.	69 34 40	3268	68 9 51	3264	66 44 57	3260	65 19 59	3257
	a Pegasi E.	91 31 33	3202	90 5 26	3192	88 39 7	3180	87 12 34	3170
16	Sun W.	100 20 43	3221	101 46 27	3207	103 12 28	3191	104 38 48	3175
	Venus W.	73 23 17	2857	74 56 31	2842	76 30 5	2825	78 4 0	2809
	Jupiter W.	72 34 16	2950	74 5 31	2936	75 37 4	2921	77 8 55	2906
	Mars W.	44 48 39	3131	46 16 11	3115	47 44 2	3100	49 12 12	3084
	Saturn W.	29 33 39	3011	31 2 38	2987	32 34 7	2963	34 5 6	2941
	Antares W.	26 10 16	2868	27 43 16	2854	29 16 34	2839	30 50 11	2825
	Fomalhaut E.	58 14 15	3245	56 48 59	3245	55 23 43	3240	53 58 28	3248
	a Pegasi E.	79 56 36	3115	78 28 44	3103	77 0 38	3092	75 32 19	3082
17	Sun W.	111 55 22	3091	113 23 42	3073	114 52 25	3056	116 21 29	3037
	Venus W.	85 59 0	2723	87 35 9	2706	89 11 41	2688	90 48 37	2670
	Jupiter W.	84 53 7	2828	86 26 59	2811	88 1 13	2793	89 35 50	2777
	Mars W.	56 38 4	2999	58 8 18	2981	59 38 54	2963	61 9 53	2946
	Saturn W.	41 46 56	2835	43 20 39	2815	44 54 48	2795	46 29 23	2774
	Antares W.	38 43 10	2746	40 18 49	2730	41 54 49	2714	43 31 11	2696
	Fomalhaut E.	46 53 23	3282	45 28 50	3296	44 4 34	3313	42 40 38	3334
	a Pegasi E.	68 7 25	3029	66 37 48	3020	65 8 0	3010	63 38 0	3001
18	Sun W.	123 52 37	2943	125 24 2	2924	126 55 51	2904	128 28 5	2884
	Venus W.	98 59 33	2576	100 39 1	2556	102 18 56	2538	103 59 17	2519
	Jupiter W.	97 34 36	2688	99 11 32	2670	100 48 52	2652	102 26 37	2633
	Mars W.	68 50 36	2852	70 23 57	2832	71 57 43	2813	73 31 54	2795
	Saturn W.	54 28 56	2675	56 6 10	2655	57 43 50	2635	59 21 58	2615
	Antares W.	51 38 52	2609	53 17 35	2591	54 56 43	2572	56 36 17	2554
	Fomalhaut E.	35 48 52	3523	34 28 53	3586	33 10 3	3662	31 52 35	3750
	a Pegasi E.	56 5 38	2971	54 34 49	2968	53 3 56	2967	51 23 2	2968
19	Sun W.	136 15 31	2788	137 50 15	2768	139 25 25	2749	141 0 59	2730
	Venus W.	112 27 41	2424	114 10 42	2405	115 54 9	2387	117 38 3	2369
	Jupiter W.	110 41 35	2543	112 21 49	2525	114 2 28	2507	115 43 32	2490
	Mars W.	81 29 4	2698	83 5 46	2679	84 42 54	2661	86 20 27	2642
	Saturn W.	67 39 13	2519	69 20 0	2500	71 1 13	2482	72 42 52	2463
	Antares W.	65 0 20	2463	66 42 25	2445	68 24 56	2427	70 7 52	2410
	a Pegasi E.	43 59 41	3008	42 29 38	3027	40 59 59	3051	39 30 49	3080
	a Arietis E.	83 23 5	2487	81 41 33	2469	79 59 36	2451	78 17 14	2433
20	Mars W.	94 34 26	2551	96 14 28	2535	97 54 53	2517	99 35 42	2501
	Saturn W.	81 17 32	2375	83 1 43	2358	84 46 18	2342	86 31 16	2326
	Antares W.	78 48 49	2323	80 34 15	2307	82 20 4	2291	84 6 17	2275
	a Pegasi E.	32 17 4	3361	30 54 3	3459	29 32 53	3577	28 13 53	3721
	a Arietis E.	69 39 16	2350	67 54 29	2334	66 9 19	2319	64 23 47	2304
21	Mars W.	108 5 18	2426	109 48 16	2412	111 31 34	2399	113 15 10	2387
	Saturn W.	95 21 47	2253	97 8 56	2240	98 56 24	2227	100 44 11	2215
	Antares W.	93 3 3	2202	94 51 28	2188	96 40 13	2175	98 29 18	2163
	a Arietis E.	55 30 51	2237	53 43 18	2225	51 55 28	2214	50 7 21	2204
	Aldebaran E.	86 53 46	2278	85 7 14	2265	83 20 23	2255	81 33 14	2241

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## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.			P. L. of Diff.			IIIh.			P. L. of Diff.			VIh.			P. L. of Diff.			IXh.			P. L. of Diff.		
			°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
22	Saturn	W.	102	32	16	2204	104	20	38	2193	106	9	16	2183	107	58	9	2174								
	Antares	W.	100	18	41	2151	102	8	22	2141	103	58	19	2130	105	48	32	2120								
	$\alpha$ Aquilæ	W.	54	27	57	3417	55	49	54	3352	57	13	5	3292	58	37	26	3237								
	$\alpha$ Arietis	E.	48	18	59	2195	46	30	24	2186	44	41	35	2178	42	52	35	2177								
	Aldebaran	E.	79	45	48	2230	77	58	5	2221	76	10	8	2211	74	21	57	2202								
23	$\alpha$ Aquilæ	W.	65	53	51	3024	67	23	34	2993	68	53	56	2964	70	24	54	2938								
	Fomalhaut	W.	37	46	27	2833	39	20	12	2770	40	55	19	2714	42	31	41	2663								
	$\alpha$ Arietis	E.	33	45	46	2159	31	56	17	2162	30	6	52	2167	28	17	35	2176								
	Aldebaran	E.	65	18	13	2173	63	29	5	2169	61	39	51	2168	59	50	35	2167								
24	$\alpha$ Aquilæ	W.	78	6	39	2851	79	40	1	2840	81	13	37	2832	82	47	23	2827								
	Fomalhaut	W.	50	47	47	2494	52	29	9	2471	54	11	3	2451	55	53	25	2435								
	$\alpha$ Pegasi	W.	30	30	48	3117	31	58	37	3006	33	28	42	2915	35	6	42	2838								
	Aldebaran	E.	50	44	26	2180	48	55	29	2187	47	6	42	2196	45	18	8	2206								
	Pollux	E.	93	13	41	2052	91	21	28	2052	89	29	14	2051	87	36	59	2052								
25	$\alpha$ Aquilæ	W.	90	37	14	2828	92	11	6	2834	93	44	50	2842	95	18	23	2852								
	Fomalhaut	W.	64	30	8	2383	66	14	7	2379	67	58	12	2375	69	42	22	2373								
	$\alpha$ Pegasi	W.	43	1	25	2593	44	40	30	2563	46	20	16	2538	48	0	37	2517								
	Aldebaran	E.	36	20	18	2295	34	34	11	2322	32	48	44	2355	31	4	4	2393								
	Pollux	E.	78	16	21	2064	76	24	27	2070	74	32	41	2074	72	41	2	2079								
26	Fomalhaut	W.	78	23	12	2385	80	7	9	2390	81	50	58	2397	83	34	37	2404								
	$\alpha$ Pegasi	W.	56	28	11	2456	58	10	26	2452	59	52	47	2449	61	35	12	2448								
	$\alpha$ Arietis	W.	12	53	49	2572	14	33	22	2479	16	15	5	2417	17	58	16	2375								
	Pollux	E.	63	25	13	2116	61	34	39	2124	59	44	17	2134	57	54	10	2144								
	Regulus	E.	100	15	34	2113	98	24	54	2120	96	34	26	2130	94	44	13	2140								
	Sun	E.	135	14	30	2412	133	31	12	2420	131	48	6	2431	130	5	15	2441								
27	Fomalhaut	W.	92	9	48	2455	93	52	4	2468	95	34	2	2481	97	15	42	2495								
	$\alpha$ Pegasi	W.	70	7	10	2460	71	49	19	2467	73	31	19	2474	75	13	9	2481								
	$\alpha$ Arietis	W.	26	44	11	2302	28	30	7	2302	30	16	4	2304	32	1	58	2307								
	Pollux	E.	48	47	27	2198	46	58	57	2210	45	10	44	2223	43	22	50	2235								
	Regulus	E.	85	36	52	2192	83	48	13	2204	81	59	51	2216	80	11	47	2228								
	Sun	E.	121	34	43	2497	119	53	25	2509	118	12	25	2522	116	31	43	2535								
28	$\alpha$ Pegasi	W.	83	39	19	2531	85	19	49	2543	87	0	2	2555	88	39	59	2568								
	$\alpha$ Arietis	W.	40	49	34	2343	42	34	31	2353	44	19	14	2363	46	3	42	2374								
	Pollux	E.	34	28	6	2302	32	42	10	2316	30	56	34	2331	29	11	20	2346								
	Regulus	E.	71	16	0	2292	69	29	48	2304	67	43	54	2317	65	58	20	2331								
	Sun	E.	108	12	44	2603	106	33	53	2618	104	55	22	2631	103	17	9	2646								
29	$\alpha$ Arietis	W.	54	42	5	2431	56	24	56	2443	58	7	29	2455	59	49	45	2467								
	Aldebaran	W.	23	10	45	2826	26	44	39	2791	28	19	19	2764	29	54	34	2744								
	Pollux	E.	20	30	48	2430	18	47	56	2450	17	5	32	2472	15	23	39	2496								
	Regulus	E.	57	15	19	2398	55	31	42	2411	53	48	23	2425	52	5	24	2438								
	Sun	E.	95	10	58	2718	93	34	42	2732	91	58	45	2747	90	23	8	2761								
30	$\alpha$ Arietis	W.	68	16	48	2530	69	57	20	2542	71	37	35	2553	73	17	34	2566								
	Aldebaran	W.	37	55	37	2702	39	32	14	2701	41	8	52	2702	42	45	29	2704								
	Regulus	E.	43	35	9	2505	41	54	2	2517	40	13	13	2531	38	32	43	2543								
	Sun	E.	82	29	43	2833	80	55	58	2847	79	22	31	2861	77	49	22	2875								

## MEAN TIME.

## LUNAR DISTANCES.

LUNAR DISTANCES.																										
Day of the Month.	Star's Name and Position.		Midnight.			P.L. of Diff.			XVh.			P.L. of Diff.			XVIIIh.			P.L. of Diff.			XXIh.			P.L. of Diff.		
			°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
22	Saturn	W.	109	47	15	2165	111	36	35	2157	113	26	7	2151	115	15	49	2143								
	Antares	W.	107	39	1	2110	109	29	45	2101	111	20	42	2094	113	11	51	2086								
	$\alpha$ Aquilæ	W.	60	2	52	3186	61	29	18	3140	62	56	39	3097	64	24	52	3060								
	$\alpha$ Arietis	E.	41	3	26	2167	39	14	8	2163	37	24	44	2160	35	35	16	2159								
	Aldebaran	E.	72	33	33	2194	70	44	57	2188	68	56	11	2182	67	7	16	2177								
23	$\alpha$ Aquilæ	W.	71	56	24	2916	73	28	22	2896	75	0	46	2878	76	33	33	2863								
	Fomalhaut	W.	44	9	10	2620	45	47	38	2583	47	26	57	2549	49	7	2	2520								
	$\alpha$ Arietis	E.	26	28	31	2186	24	39	43	2203	22	51	20	2225	21	3	30	2256								
	Aldebaran	E.	58	1	17	2168	56	11	59	2169	54	22	44	2171	52	33	32	2175								
24	$\alpha$ Aquilæ	W.	84	21	16	2823	85	55	14	2820	87	29	16	2821	89	3	17	2824								
	Fomalhaut	W.	57	36	10	2420	59	19	16	2408	61	2	40	2398	62	46	18	2389								
	$\alpha$ Pegasi	W.	36	34	21	2772	38	9	25	2716	39	45	44	2668	41	23	7	2627								
	Aldebaran	E.	43	29	49	2219	41	41	50	2233	39	54	12	2251	38	7	0	2271								
25	Pollux	E.	85	44	46	2053	83	52	34	2055	82	0	26	2057	80	8	21	2060								
	$\alpha$ Aquilæ	W.	96	51	43	2865	98	24	47	2879	99	57	33	2895	101	29	58	2913								
	Fomalhaut	W.	71	26	35	2373	73	10	48	2374	74	55	0	2377	76	39	8	2380								
	$\alpha$ Pegasi	W.	49	41	27	2500	51	22	41	2485	53	4	16	2473	54	46	7	2464								
	Aldebaran	E.	29	20	19	2438	27	37	38	2491	25	56	12	2556	24	16	17	2635								
26	Pollux	E.	70	49	31	2086	68	58	10	2093	67	7	0	2100	65	16	1	2107								
	Fomalhaut	W.	85	18	6	2412	87	1	23	2422	88	44	26	2432	90	27	15	2443								
	$\alpha$ Pegasi	W.	63	17	39	2447	65	0	7	2449	66	42	32	2451	68	24	54	2455								
	$\alpha$ Arietis	W.	19	42	27	2346	21	27	20	2326	23	12	41	2313	24	58	21	2306								
	Pollux	E.	56	4	18	2154	54	14	41	2165	52	25	20	2175	50	36	15	2186								
	Regulus	E.	92	54	14	2149	91	4	30	2159	89	15	1	2170	87	25	48	2181								
27	Sun	E.	128	23	38	2450	126	40	15	2462	124	58	8	2473	123	16	17	2485								
	Fomalhaut	W.	98	57	2	2511	100	38	0	2526	102	18	37	2543	103	58	51	2559								
	$\alpha$ Pegasi	W.	76	54	49	2489	78	36	17	2499	80	17	32	2509	81	58	33	2520								
	$\alpha$ Arietis	W.	33	47	48	2312	35	33	30	2319	37	19	2	2326	39	4	24	2334								
	Pollux	E.	41	35	14	2248	39	47	58	2261	38	1	1	2274	36	14	23	2288								
	Regulus	E.	78	24	1	2240	76	36	33	2252	74	49	23	2265	73	2	32	2278								
28	Sun	E.	114	51	18	2548	113	11	12	2561	111	31	24	2575	109	51	55	2588								
	$\alpha$ Pegasi	W.	90	19	38	2582	91	58	55	2596	93	37	59	2610	95	16	41	2625								
	$\alpha$ Arietis	W.	47	47	54	2384	49	31	52	2396	51	15	33	2408	52	58	57	2419								
	Pollux	E.	27	26	28	2362	25	41	58	2377	23	57	50	2394	22	14	7	2411								
	Regulus	E.	64	13	5	2344	62	28	9	2357	60	43	33	2371	58	59	16	2385								
29	Sun	E.	101	39	16	2660	100	1	42	2675	98	24	28	2689	96	47	33	2704								
	$\alpha$ Arietis	W.	61	31	41	2480	63	13	26	2492	64	54	50	2504	66	35	58	2517								
	Aldebaran	W.	31	30	16	2729	33	6	18	2717	34	42	35	2709	36	19	3	2704								
	Pollux	E.	13	42	20	2537	12	1	44	2565	10	22	1	2617	8	43	29	2698								
	Regulus	E.	50	23	43	2451	48	40	21	2465	46	58	18	2478	45	16	34	2492								
30	Sun	E.	88	47	49	2776	87	12	50	2790	85	38	9	2804	84	3	47	2818								
	$\alpha$ Arietis	W.	74	57	15	2578	76	36	40	2590	78	15	48	2602	79	54	41	2614								
	Aldebaran	W.	44	22	4	2707	45	58	35	2711	47	35	0	2715	49	11	20	2721								
	Regulus	E.	36	52	30	2556	35	12	34	2569	33	32	56	2581	31	53	35	2593								
	Sun	E.	76	16	31	2888	74	43	57	2902	73	11	40	2915	71	39	40	2928								

## AT APPARENT NOON.

MEAN  
TIME.

## THE SUN'S

THE  
MOON'S

Day of the Week.	Day of the Month.	THE SUN'S					Equation of Time, to be sub. fr. Apparent Time.					THE MOON'S		
		Apparent Rt. Ascen.	Diff. for 1 h.	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.	m	s	s	Diff. for 1 h.	Age.	Meri- dian Pas- sage.		
		h m s	s	° ' "	" ' "	"	m	s	s		d	h m		
Tu.	1	12 27 56	09	9.1	S. 3 1 14	3 58	3	16	0.5	10 10	67	0.792	23.6	20 6
We.	2	12 31 33	58	9.1	3 24 34	1 58	2	16	0.7	10 29	68	0.779	24.6	20 54
Th.	3	12 35 11	39	9.1	3 47 51	7 58	1	16	1.0	10 48	38	0.765	25.6	21 38
Fri.	4	12 38 49	53	9.1	4 11 6	8 58	0	16	1.3	11 6	74	0.750	26.6	22 20
Sat.	5	12 42 28	02	9.1	4 34 19	0 57	9	16	1.6	11 24	74	0.735	27.6	23 0
Sun.	6	12 46 6	89	9.1	4 57 27	9 57	7	16	1.8	11 42	38	0.718	28.6	23 40
Mo.	7	12 49 46	15	9.2	5 20 33	1 57	6	16	2.1	11 59	62	0.702	29.6	♂
Tu.	8	12 53 25	81	9.2	5 43 34	3 57	4	16	2.4	12 16	46	0.685	0.9	0 21
We.	9	12 57 5	89	9.2	6 6 31	0 57	2	16	2.7	12 32	89	0.666	1.9	1 3
Th.	10	13 0 46	41	9.2	6 29 22	8 56	9	16	2.9	12 48	88	0.647	2.9	1 47
Fri.	11	13 4 27	39	9.2	6 52 9	4 56	7	16	3.2	13 4	41	0.627	3.9	2 34
Sat.	12	13 8 8	85	9.2	7 14 50	4 56	5	16	3.5	13 19	47	0.607	4.9	3 24
Sun.	13	13 11 50	78	9.3	7 37 25	3 56	2	16	3.8	13 34	05	0.587	5.9	4 16
Mo.	14	13 15 33	22	9.3	7 59 53	8 55	9	16	4.1	13 48	14	0.565	6.9	5 9
Tu.	15	13 19 16	18	9.3	8 22 15	6 55	6	16	4.3	14 1	70	0.543	7.9	6 2
We.	16	13 22 59	67	9.3	8 44 30	0 55	3	16	4.6	14 14	74	0.520	8.9	6 53
Th.	17	13 26 43	71	9.4	9 6 36	9 55	0	16	4.9	14 27	22	0.496	9.9	7 44
Fri.	18	13 30 28	33	9.4	9 28 35	9 54	6	16	5.2	14 39	12	0.471	10.9	8 33
Sat.	19	13 31 13	54	9.4	9 50 26	6 54	3	16	5.4	14 50	43	0.448	11.9	9 21
Sun.	20	13 37 59	35	9.4	10 12 8	6 53	9	16	5.7	15 1	13	0.420	12.9	10 10
Mo.	21	13 41 45	79	9.5	10 33 41	5 53	5	16	6.0	15 11	21	0.393	13.9	11 2
Tu.	22	13 45 32	89	9.5	10 55 5	0 53	1	16	6.3	15 20	64	0.365	14.9	11 56
We.	23	13 49 20	67	9.5	11 16 18	8 52	7	16	6.5	15 29	39	0.336	15.9	12 55
Th.	24	13 53 9	13	9.5	11 37 22	5 52	2	16	6.8	15 37	46	0.307	16.9	13 57
Fri.	25	13 56 58	30	9.6	11 58 15	7 51	8	16	7.0	15 44	83	0.277	17.9	15 2
Sat.	26	14 0 48	19	9.6	12 18 57	9 51	3	16	7.3	15 51	48	0.246	18.9	16 6
Sun.	27	14 4 38	83	9.6	12 39 28	8 50	8	16	7.5	15 57	39	0.214	19.9	17 7
Mo.	28	14 8 30	23	9.7	12 59 48	3 50	3	16	7.7	16 2	53	0.183	20.9	18 2
Tu.	29	14 12 22	39	9.7	13 19 55	0 49	8	16	8.0	16 6	92	0.150	21.9	18 52
We.	30	14 16 15	33	9.7	13 39 50	3 49	3	16	8.2	16 10	52	0.117	22.9	19 37
Th.	31	14 20 9	07	9.8	13 59 32	2 48	7	16	8.5	16 13	33	0.083	23.9	20 20
Fri.	32	14 24 3	62		S. 14 19 0	8		16	8.7	16 15	32		24.9	21 0

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Tu.	1	15 34.9	15 29.5	57 10.9	56 50.9	8 1 49	8 29 17	24 31 18N.	22 39 0N.
We.	2	15 24.3	15 19.4	56 31.9	56 14.1	8 55 41	9 21 5	20 31 6	18 10 7
Th.	3	15 14.8	15 10.5	55 56.9	55 41.2	9 45 33	10 9 12	15 38 27	12 58 19
Fri.	4	15 6.5	15 2.8	55 26.5	55 12.9	10 32 9	10 54 32	10 11 44	7 20 35
Sat.	5	14 59.4	14 56.3	55 0.4	54 49.0	11 16 29	11 38 7	4 26 35N.	1 31 23N.
Sun.	6	14 53.4	14 50.8	54 38.6	54 29.1	11 59 33	12 20 55	1 23 33S.	4 16 42S.
Mo.	7	14 48.5	14 46.6	54 20.6	54 13.5	12 42 20	13 3 54	7 6 42	9 52 7
Tu.	8	14 45.0	14 43.6	54 7.6	54 2.7	13 25 44	13 47 55	12 31 35	15 3 42
We.	9	14 42.7	14 42.1	53 59.2	53 57.1	14 10 33	14 33 42	17 27 3	19 40 11
Th.	10	14 42.0	14 42.3	53 56.6	53 57.7	14 57 26	15 21 46	21 41 41	23 30 3
Fri.	11	14 43.0	14 44.3	54 0.5	54 5.3	15 46 45	16 12 21	25 3 52	26 21 41
Sat.	12	14 46.1	14 48.6	54 11.9	54 20.8	16 38 31	17 5 12	27 22 13	28 4 14
Sun.	13	14 51.5	14 55.2	54 31.7	54 45.0	17 32 18	17 59 41	28 26 46	28 29 1
Mo.	14	14 59.4	15 4.3	55 0.6	55 18.6	18 27 13	18 54 47	28 10 28	27 30 57
Tu.	15	15 9.8	15 16.0	55 38.8	56 1.3	19 22 15	19 49 30	26 30 33	25 9 40
We.	16	15 22.6	15 29.8	56 25.7	56 52.1	20 16 28	20 43 7	23 28 59	21 29 27
Th.	17	15 37.3	15 45.2	57 19.7	57 48.6	21 9 24	21 35 23	19 12 12	16 38 36
Fri.	18	15 53.2	16 1.2	58 17.9	58 47.2	22 1 52	22 26 36	13 50 13	10 48 49
Sat.	19	16 9.0	16 16.4	59 15.8	59 43.0	22 52 22	23 17 31	7 36 24	4 15 11S.
Sun.	20	16 23.2	16 29.3	60 8.2	60 30.4	23 43 9	0 9 7	0 47 41S.	2 43 17N.
Mo.	21	16 34.4	16 38.4	60 49.2	61 4.0	0 35 33	1 2 35	6 14 35N.	9 42 49
Tu.	22	16 41.2	16 42.7	61 14.3	61 19.7	1 30 23	1 59 3	13 4 16	16 14 59
We.	23	16 42.8	16 41.6	61 20.0	61 15.6	2 28 39	2 59 13	19 10 58	21 48 16
Th.	24	16 39.1	16 35.4	61 6.4	60 52.7	3 30 41	4 2 56	24 3 8	25 52 22
Fri.	25	16 30.6	16 25.0	60 35.4	60 14.5	4 35 45	5 8 49	27 13 26	28 4 48
Sat.	26	16 18.5	16 11.6	59 51.0	59 25.6	5 41 49	6 14 24	28 25 59	28 17 32
Sun.	27	16 4.3	15 56.8	58 58.7	58 31.3	6 46 16	7 17 10	27 41 2	26 38 46
Mo.	28	15 49.4	15 42.0	58 3.9	57 36.9	7 46 56	8 15 28	25 13 31	23 28 19
Tu.	29	15 34.9	15 28.1	57 10.7	56 46.0	8 42 47	9 8 53	21 26 12	19 10 3
We.	30	15 21.8	15 15.9	56 22.7	56 1.0	9 33 59	9 58 4	16 42 34	14 6 7
Th.	31	15 10.4	15 5.5	55 41.0	55 22.9	10 21 20	10 43 56	11 22 51	8 34 42N.
Fri.	32	15 1.0	14 57.1	55 6.6	54 52.2	11 5 58		5 43 20N.	

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	<i>a</i> Arietis W.	81 33 17	2626	83 11 36	2638	84 49 40	2649	86 27 29	2661
	Aldebaran W.	50 47 32	2727	52 23 36	2734	53 59 31	2741	55 35 17	2747
	Regulus E.	30 14 31	2606	28 35 44	2618	26 57 13	2630	25 18 59	2643
	Sun E.	70 7 57	2942	68 36 31	2954	67 5 21	2967	65 34 27	2980
2	Aldebaran W.	63 31 45	2786	65 6 31	2794	66 41 7	2802	68 15 33	2810
	Pollux W.	19 50 35	2723	21 26 45	2729	23 2 47	2736	24 38 39	2743
	Sun E.	58 3 48	3040	56 34 25	3052	55 5 17	3063	53 36 22	3075
3	Aldebaran W.	76 5 1	2851	77 38 23	2859	79 11 34	2868	80 44 34	2876
	Pollux W.	32 35 28	2784	34 10 17	2792	35 44 56	2800	37 19 24	2808
	Sun E.	46 15 12	3128	44 47 37	3139	43 20 15	3149	41 53 5	3159
4	Aldebaran W.	88 27 1	2916	89 59 0	2924	91 30 48	2932	93 2 26	2940
	Pollux W.	45 9 8	2848	46 42 34	2856	48 15 50	2863	49 48 56	2870
	Regulus W.	8 19 17	2877	9 52 5	2876	11 24 55	2877	12 57 43	2880
	Sun E.	34 40 15	3209	33 14 17	3219	31 48 30	3229	30 22 55	3238
9	Saturn E.	30 46 11	3219	29 20 25	3234	27 54 56	3250	26 29 46	3267
	Antares E.	31 4 44	3068	29 35 55	3070	28 7 9	3073	26 38 26	3075
	<i>a</i> Aquilæ E.	86 1 48	3836	84 47 23	3843	83 33 5	3849	82 18 53	3856
10	Sun W.	32 0 5	3475	33 20 57	3476	34 41 48	3475	36 2 40	3475
	<i>a</i> Aquilæ E.	76 10 8	3907	74 56 55	3919	73 43 54	3931	72 31 6	3945
	Fomalhaut E.	100 45 18	3355	99 22 10	3353	97 59 0	3351	96 35 48	3351
11	Sun W.	42 47 12	3469	44 8 11	3466	45 29 13	3464	46 50 17	3462
	<i>a</i> Aquilæ E.	66 31 1	4033	65 19 54	4054	64 9 8	4077	62 58 44	4102
	Fomalhaut E.	89 39 28	3344	88 16 8	3343	86 52 46	3342	85 29 23	3340
12	Sun W.	53 36 33	3441	54 58 3	3437	56 19 38	3431	57 41 19	3425
	<i>a</i> Aquilæ E.	57 13 16	4257	56 5 43	4294	54 58 45	4335	53 52 25	4381
	Fomalhaut E.	78 32 6	3335	77 8 35	3333	75 45 2	3332	74 21 28	3331
	<i>a</i> Pegasi E.	100 30 52	3302	99 6 43	3296	97 42 27	3289	96 18 3	3282
13	Sun W.	64 31 34	3390	65 54 2	3381	67 16 40	3372	68 39 29	3363
	Saturn W.	18 8 30	3345	19 31 50	3296	20 56 6	3254	22 21 11	3219
	Mars W.	16 39 20	3406	18 1 30	3379	19 24 10	3357	20 47 16	3336
	Antares W.	16 19 4	3012	17 49 2	3004	19 19 10	2996	20 49 28	2987
	Fomalhaut E.	67 23 20	3327	65 59 40	3326	64 35 59	3327	63 12 19	3328
	<i>a</i> Pegasi E.	89 14 3	3248	87 48 50	3240	86 23 28	3233	84 57 58	3225
14	Sun W.	75 36 22	3310	77 0 22	3297	78 24 37	3284	79 49 7	3272
	Saturn W.	29 35 48	3087	31 4 13	3066	32 33 4	3046	34 2 20	3027
	Antares W.	28 23 55	2936	29 55 28	2926	31 27 14	2914	32 59 15	2902
	Mars W.	27 48 14	3250	29 13 24	3233	30 38 54	3218	32 4 42	3203
	Fomalhaut E.	56 14 17	3338	54 50 49	3342	53 27 26	3347	52 4 9	3353
	<i>a</i> Pegasi E.	77 48 12	3187	76 21 47	3170	74 55 13	3171	73 28 29	3163
15	Sun W.	86 55 32	3201	88 21 40	3185	89 48 7	3169	91 14 53	3153
	Saturn W.	41 34 33	2935	43 6 8	2916	44 38 7	2898	46 10 29	2880
	Antares W.	40 43 22	2836	42 17 3	2821	43 51 3	2807	45 25 22	2792
	Mars W.	39 18 25	3122	40 46 8	3105	42 14 12	3088	43 42 36	3071
	Fomalhaut E.	45 10 16	3114	43 48 15	3134	42 26 37	3157	41 5 25	3184
	<i>a</i> Pegasi E.	66 12 32	3126	64 44 54	3119	63 17 8	3113	61 49 14	3107

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Day of the Month.	Star's Name and Position.	Midnight.			P.L. of Diff.	XVh.			P.L. of Diff.	XVIIIh.			P.L. of Diff.	XXIh.			P.L. of Diff.
		°	'	"		°	'	"		°	'	"		°	'	"	
1	<i>a</i> Arietis W.	88	5	2	2672	89	42	20	2683	91	19	23	2694	92	56	11	2705
	Aldebaran W.	57	10	55	2755	58	46	22	2762	60	21	40	2769	61	56	48	2778
	Regulus E.	23	41	2	2655	22	3	21	2666	20	25	56	2678	18	48	47	2691
	Sun E.	64	3	49	2992	62	33	26	3005	61	3	19	3016	59	33	26	3028
2	Aldebaran W.	69	49	48	2818	71	23	52	2827	72	57	45	2835	74	31	28	2842
	Pollux W.	26	14	22	2751	27	49	54	2759	29	25	16	2767	31	0	27	2775
	Sun E.	53	7	42	3085	50	39	14	3096	49	11	0	3108	47	43	0	3118
3	Aldebaran W.	82	17	24	2884	83	50	4	2892	85	22	33	2900	86	54	52	2908
	Pollux W.	38	53	41	2816	40	27	48	2824	42	1	45	2832	43	35	31	2839
	Sun E.	40	26	7	3169	38	59	21	3180	37	32	48	3189	36	6	26	3199
4	Aldebaran W.	94	33	54	2947	96	5	13	2956	97	36	21	2963	99	7	20	2972
	Pollux W.	51	21	53	2877	52	54	41	2885	54	27	19	2892	55	59	48	2898
	Regulus W.	14	30	27	2885	16	3	5	2890	17	35	37	2895	19	8	2	2902
	Sun E.	28	57	31	3248	27	32	18	3258	26	7	18	3268	24	42	29	3278
9	Saturn E.	25	4	56	3288	23	40	31	3312	22	16	34	3341	20	53	10	3375
	Antares E.	25	9	46	3078	23	41	9	3079	22	12	34	3081	20	44	1	3083
	<i>a</i> Aquilæ E.	81	4	49	3865	79	50	54	3875	78	37	9	3884	77	23	33	3895
10	Sun W.	37	23	32	3474	38	44	25	3473	40	5	19	3472	41	26	15	3471
	<i>a</i> Aquilæ E.	71	18	32	3961	70	6	14	3977	68	54	12	3994	67	42	27	4014
	Fomalhaut E.	95	18	35	3349	93	49	20	3348	92	26	4	3347	91	2	47	3345
11	Sun W.	48	11	24	3458	49	32	35	3454	50	53	50	3451	52	15	9	3447
	<i>a</i> Aquilæ E.	61	48	44	4128	60	39	9	4156	59	30	1	4187	58	21	23	4220
	Fomalhaut E.	84	5	58	3339	82	42	32	3338	81	19	5	3337	79	55	36	3336
12	Sun W.	59	3	7	3420	60	25	1	3412	61	47	4	3405	63	9	15	3398
	<i>a</i> Aquilæ E.	52	46	47	4430	51	41	53	4484	50	37	47	4542	49	34	32	4606
	Fomalhaut E.	72	57	53	3330	71	34	16	3329	70	10	38	3328	68	46	59	3328
	<i>a</i> Pegasi E.	94	53	31	3276	93	28	52	3269	92	4	4	3261	90	39	7	3255
13	Sun W.	70	-2	28	3353	71	25	38	3343	72	49	0	3332	74	12	34	3320
	Saturn W.	23	46	58	3187	25	13	23	3159	26	40	21	3124	28	7	50	3110
	Mars W.	22	10	46	3316	23	34	39	3399	24	58	52	3282	26	23	24	3267
	Antares W.	22	19	57	2977	23	50	38	2968	25	21	31	2958	26	52	37	2948
	Fomalhaut E.	61	48	40	3328	60	25	1	3330	59	1	24	3332	57	37	49	3334
	<i>a</i> Pegasi E.	83	32	19	3218	82	6	31	3210	80	40	34	3203	79	14	28	3194
14	Sun W.	81	13	51	3259	82	38	51	3244	84	4	8	3230	85	29	41	3215
	Saturn W.	35	31	59	3007	37	2	3	2989	38	32	30	2970	40	3	20	2952
	Antares W.	34	31	32	2890	36	4	4	2877	37	36	53	2863	39	9	59	2850
	Mars W.	33	30	48	3187	34	57	13	3170	36	23	58	3154	37	51	2	3138
	Fomalhaut E.	50	40	59	3362	49	17	59	3372	47	55	11	3384	46	32	36	3397
	<i>a</i> Pegasi E.	72	1	36	3156	70	34	34	3148	69	7	22	3141	67	40	2	3133
15	Sun W.	92	41	58	3136	94	9	24	3119	95	37	10	3103	97	5	16	3084
	Saturn W.	47	43	14	2862	49	16	22	2843	50	49	54	2825	52	23	50	2807
	Antares W.	47	0	1	2776	48	35	0	2760	50	10	20	2744	51	46	1	2729
	Mars W.	45	11	21	3053	46	40	28	3036	48	9	56	3018	49	39	46	3000
	Fomalhaut E.	39	44	43	3517	38	24	38	3555	37	5	15	3599	35	46	40	3652
	<i>a</i> Pegasi E.	60	21	13	3102	58	53	6	3097	57	24	53	3093	55	56	35	3090

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Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
15	<i>a</i> Arietis E.	107 31 37	2861	105 58 28	2840	104 25 0	2832	102 51 13	2816
16	<i>Sun</i> W.	98 33 45	3067	100 2 35	3048	101 31 49	3030	103 1 25	3011
	Saturn W.	53 58 9	2788	55 32 52	2768	57 8 2	2750	58 43 36	2731
	Antares W.	53 22 3	2711	54 58 28	2694	56 35 16	2677	58 12 27	2660
	Mars W.	51 9 59	2981	52 40 35	2962	54 11 35	2944	55 42 58	2925
	<i>a</i> Pegasi E.	54 28 13	3088	52 59 49	3088	51 31 25	3088	50 3 1	3091
	<i>a</i> Arietis E.	94 57 8	2735	93 21 14	2717	91 44 57	2700	90 8 17	2683
17	<i>Sun</i> W.	110 35 22	2913	112 7 24	2894	113 39 51	2873	115 12 44	2853
	Saturn W.	66 47 47	2635	68 25 56	2615	70 4 31	2595	71 43 33	2575
	Antares W.	66 24 24	2568	68 4 3	2549	69 44 8	2530	71 24 39	2512
	Mars W.	63 26 5	2826	64 59 59	2806	66 34 19	2786	68 9 5	2766
	<i>a</i> Pegasi E.	42 42 44	3141	41 15 24	3162	39 48 29	3188	38 22 5	3219
	<i>a</i> Arietis E.	81 58 59	2592	80 19 53	2574	78 40 22	2555	77 0 25	2536
18	<i>Sun</i> W.	123 3 41	2752	124 39 12	2732	126 15 9	2712	127 51 33	2692
	Saturn W.	80 5 33	2477	81 47 19	2457	83 29 33	2438	85 12 14	2418
	Antares W.	79 53 53	2416	81 37 5	2396	83 20 45	2377	85 4 52	2359
	Mars W.	76 9 40	2663	77 47 9	2643	79 25 5	2623	81 3 29	2603
	<i>a</i> Arietis E.	68 34 11	2443	66 51 38	2424	65 8 38	2407	63 25 13	2388
	Aldebaran E.	99 50 19	2492	98 8 55	2472	96 27 3	2453	94 44 44	2434
19	Saturn W.	93 52 28	2325	95 37 51	2307	97 23 40	2290	99 9 54	2273
	Antares W.	93 52 16	2266	95 39 6	2249	97 26 21	2231	99 14 3	2212
	Mars W.	89 22 16	2505	91 3 22	2486	92 44 55	2467	94 26 54	2450
	<i>a</i> Arietis E.	54 41 41	2302	52 55 45	2286	51 9 25	2270	49 22 42	2255
	Aldebaran E.	86 6 20	2341	84 21 20	2324	82 35 55	2307	80 50 6	2290
20	Saturn W.	108 7 9	2195	109 55 44	2181	111 44 40	2168	113 33 56	2155
	Mars W.	103 2 55	2366	104 47 18	2351	106 32 4	2336	108 17 11	2323
	<i>a</i> Aquilæ W.	60 32 30	3187	61 58 55	3138	63 26 19	3090	64 54 41	3047
	Fomalhaut W.	32 21 24	3192	33 47 43	3079	35 16 18	2981	36 46 54	2895
	<i>a</i> Arietis E.	40 23 55	2192	38 35 16	2182	36 46 22	2174	34 57 15	2167
	Aldebaran E.	71 55 10	2217	70 7 7	2204	68 18 45	2192	66 30 6	2181
21	<i>a</i> Aquilæ W.	72 28 36	2877	74 1 25	2851	75 34 47	2828	77 8 38	2808
	Fomalhaut W.	44 43 59	2586	46 23 13	2543	48 3 26	2505	49 44 33	2469
	<i>a</i> Pegasi W.	25 34 40	3681	26 51 47	3466	28 12 49	3288	29 37 14	3138
	<i>a</i> Arietis E.	25 50 11	2169	24 0 57	2181	22 12 1	2200	20 23 34	2229
	Aldebaran E.	57 23 4	2140	55 33 6	2135	53 43 0	2132	51 52 49	2130
	Pollux E.	100 2 48	2036	98 10 10	2026	96 17 16	2017	94 24 9	2008
22	<i>a</i> Aquilæ W.	85 3 38	2739	86 39 26	2732	88 15 23	2728	89 51 26	2726
	Fomalhaut W.	58 20 59	2342	60 5 57	2325	61 51 20	2309	63 37 6	2296
	<i>a</i> Pegasi W.	37 16 56	2665	38 54 23	2607	40 33 9	2556	42 13 5	2512
	Aldebaran E.	42 41 57	2146	40 52 8	2155	39 2 33	2168	37 13 18	2184
	Pollux E.	84 55 37	1978	83 1 28	1975	81 7 14	1972	79 12 55	1970
23	<i>a</i> Aquilæ W.	97 51 27	2747	99 27 4	2759	101 2 25	2773	102 37 28	2789
	Fomalhaut W.	72 29 50	2258	74 16 52	2255	76 3 58	2254	77 51 5	2255
	<i>a</i> Pegasi W.	50 45 35	2368	52 29 56	2351	54 14 42	2337	55 59 48	2324
	Aldebaran E.	28 15 23	2344	26 30 27	2401	24 46 53	2470	23 4 58	2559
	Pollux E.	69 40 59	1972	67 46 40	1975	65 52 26	1978	63 58 17	1982

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Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° / '		° / '		° / '		° / '	
15	<i>α</i> Arietis E.	101 17 6	2800	99 42 38	2785	98 7 50	2768	96 32 40	2751
16	<i>Sun</i> W.	104 31 24	2992	106 1 47	2973	107 32 34	2953	109 3 46	2934
	<i>Saturn</i> W.	60 19 35	2712	61 55 59	2693	63 32 49	2672	65 10 5	2654
	<i>Antares</i> W.	59 50 1	2641	61 28 0	2623	63 6 23	2605	64 45 11	2587
	<i>Mars</i> W.	57 14 45	2905	58 46 57	2885	60 19 35	2866	61 52 37	2846
	<i>α</i> Pegasi E.	48 34 41	3096	47 6 26	3102	45 38 19	3112	44 10 24	3124
	<i>α</i> Arietis E.	88 31 14	2665	86 53 47	2647	85 15 56	2629	83 37 40	2610
17	<i>Sun</i> W.	116 46 3	2833	118 19 48	2813	119 53 59	2792	121 28 37	2772
	<i>Saturn</i> W.	73 23 3	2556	75 2 59	2535	76 43 23	2516	78 24 14	2496
	<i>Antares</i> W.	73 5 36	2493	74 46 59	2473	76 28 50	2454	78 11 8	2435
	<i>Mars</i> W.	69 44 18	2745	71 19 58	2725	72 56 5	2705	74 32 39	2684
	<i>α</i> Pegasi E.	36 56 18	3257	35 31 16	3306	34 7 11	3363	32 44 12	3433
	<i>α</i> Arietis E.	75 20 2	2518	73 39 14	2499	71 57 59	2480	70 16 18	2462
18	<i>Sun</i> W.	129 28 24	2673	131 5 40	2653	132 43 23	2634	134 21 32	2615
	<i>Saturn</i> W.	86 55 23	2399	88 38 59	2380	90 23 2	2362	92 7 32	2344
	<i>Antares</i> W.	86 49 26	2340	88 34 28	2321	90 19 57	2302	92 5 53	2284
	<i>Mars</i> W.	82 42 20	2583	84 21 38	2563	86 1 24	2543	87 41 37	2525
	<i>α</i> Arietis E.	61 41 21	2371	59 57 4	2353	58 12 21	2336	56 27 14	2318
	<i>Aldebaran</i> E.	93 1 57	2415	91 18 43	2396	89 35 2	2377	87 50 54	2359
19	<i>Saturn</i> W.	100 56 33	2256	102 43 37	2241	104 31 4	2225	106 18 55	2209
	<i>Antares</i> W.	101 2 11	2196	102 50 44	2180	104 39 42	2164	106 29 4	2148
	<i>Mars</i> W.	96 9 17	2433	97 52 5	2415	99 35 18	2398	101 18 55	2382
	<i>α</i> Arietis E.	47 35 37	2241	45 48 11	2227	44 0 24	2215	42 12 19	2202
	<i>Aldebaran</i> E.	79 3 52	2275	77 17 15	2259	75 30 15	2244	73 42 53	2230
20	<i>Saturn</i> W.	115 23 32	2143	117 13 26	2132	119 3 37	2122	120 54 3	2111
	<i>Mars</i> W.	110 2 37	2309	111 48 23	2296	113 34 28	2284	115 20 51	2273
	<i>α</i> Aquilæ W.	66 23 56	3007	67 54 0	2970	69 24 50	2936	70 56 23	2905
	<i>Fomalhaut</i> W.	38 19 20	2818	39 53 25	2750	41 28 58	2689	43 5 52	2635
	<i>α</i> Arietis E.	33 7 58	2163	31 18 34	2159	29 29 5	2159	27 39 36	2162
	<i>Aldebaran</i> E.	64 41 9	2171	62 51 58	2161	61 2 32	2153	59 12 54	2145
21	<i>α</i> Aquilæ W.	78 42 56	2790	80 17 39	2773	81 52 42	2760	83 28 2	2748
	<i>Fomalhaut</i> W.	51 26 30	2438	53 9 11	2410	54 52 32	2386	56 36 29	2362
	<i>α</i> Pegasi W.	31 4 37	3012	32 34 35	2905	34 6 48	2812	35 41 0	2733
	<i>α</i> Arietis E.	18 35 49	2269	16 49 4	2330	15 3 48	2419	13 20 41	2556
	<i>Aldebaran</i> E.	50 2 35	2129	48 12 20	2130	46 22 7	2133	44 31 58	2138
	<i>Pollux</i> E.	92 30 47	2001	90 37 15	1994	88 43 31	1988	86 49 38	1983
22	<i>α</i> Aquilæ W.	91 27 32	2726	93 3 38	2728	94 39 41	2732	96 15 38	2738
	<i>Fomalhaut</i> W.	65 23 12	2285	67 9 34	2276	68 56 9	2266	70 42 55	2262
	<i>α</i> Pegasi W.	43 54 2	2474	45 35 52	2441	47 18 28	2413	49 1 44	2389
	<i>Aldebaran</i> E.	35 24 27	2205	33 36 7	2230	31 48 24	2260	30 1 26	2298
	<i>Pollux</i> E.	77 18 33	1968	75 24 9	1968	73 29 45	1968	71 35 21	1970
23	<i>α</i> Aquilæ W.	104 12 10	2808	105 46 27	2824	107 20 17	2853	108 53 36	2881
	<i>Fomalhaut</i> W.	79 38 11	2256	81 25 15	2259	83 12 15	2264	84 59 8	2270
	<i>α</i> Pegasi W.	57 45 12	2315	59 30 49	2308	61 16 37	2303	63 2 32	2300
	<i>Aldebaran</i> E.	21 25 7	2672	19 47 50	2818	18 13 46	3011	16 43 47	3272
	<i>Pollux</i> E.	62 4 15	1988	60 10 22	1994	58 16 38	2000	56 23 4	2008

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Day of the Month.	Star's Name and Position.	Noon.	P. L. of Diff.	IIIh.	P. L. of Diff.	VIh.	P. L. of Diff.	IXh.	P. L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
23	Regulus E.	106 31 20	1968	104 36 55	1971	102 42 35	1974	100 48 20	1978
24	Fomalhaut W.	86 45 52	2277	88 32 26	2284	90 18 49	2294	92 4 57	2304
	a Pegasi W.	64 48 31	2299	66 31 32	2300	68 20 32	2301	70 6 30	2305
	a Arietis W.	21 14 53	2183	23 3 46	2167	24 53 3	2156	26 42 37	2151
	Pollux E.	54 29 43	2016	52 36 34	2025	50 43 39	2035	48 51 0	2045
	Regulus E.	91 19 7	2010	89 25 49	2019	87 32 45	2028	85 39 55	2038
	Venus E.	128 13 56	1983	126 19 55	1992	124 26 8	2002	122 32 37	2013
25	Fomalhaut W.	100 51 15	2374	102 35 27	2391	104 19 14	2410	106 2 35	2429
	a Pegasi W.	78 54 24	2341	80 39 24	2351	82 24 9	2363	84 8 37	2375
	a Arietis W.	35 51 4	2163	37 40 28	2170	39 29 41	2180	41 18 39	2190
	Pollux E.	39 32 1	2107	37 41 12	2120	35 50 44	2135	34 0 39	2151
	Regulus E.	76 19 55	2096	74 28 50	2109	72 38 5	2124	70 47 42	2138
	Venus E.	113 9 33	2076	111 17 57	2090	109 26 43	2105	107 35 51	2120
	Sun E.	139 51 4	2419	138 7 56	2431	136 25 6	2445	134 42 36	2459
26	a Pegasi W.	92 46 2	2450	94 28 25	2468	96 10 23	2486	97 51 56	2504
	a Arietis W.	50 19 19	2252	52 6 29	2266	53 53 19	2281	55 39 47	2296
	Aldebaran W.	21 11 45	2810	22 46 0	2743	24 21 43	2693	25 58 33	2655
	Pollux E.	24 56 23	2239	23 8 53	2258	21 21 52	2280	19 35 23	2304
	Regulus E.	61 41 18	2214	59 53 11	2230	58 5 28	2246	56 18 9	2263
	Venus E.	98 27 35	2202	96 39 11	2220	94 51 13	2237	93 3 41	2255
	Sun E.	126 15 18	2538	124 34 58	2555	122 55 1	2572	121 15 28	2589
27	a Arietis W.	64 26 26	2376	66 10 35	2391	67 54 22	2409	69 37 44	2426
	Aldebaran W.	34 11 30	2581	35 50 51	2580	37 30 14	2580	39 9 36	2584
	Regulus E.	47 27 48	2348	45 42 59	2365	43 58 34	2383	42 14 35	2401
	Venus E.	84 12 46	2348	82 27 56	2366	80 43 32	2385	78 59 36	2404
	Sun E.	113 3 45	2680	111 26 38	2698	109 49 56	2717	108 13 39	2736
28	a Arietis W.	78 8 38	2510	79 49 38	2526	81 30 15	2543	83 10 28	2559
	Aldebaran W.	47 24 38	2621	49 3 4	2631	51 41 17	2642	52 19 15	2653
	Regulus E.	33 40 53	2488	31 59 23	2505	30 18 16	2522	28 37 34	2539
	Venus E.	70 26 37	2498	68 45 21	2516	67 4 30	2535	65 24 5	2553
	Sun E.	100 18 21	2829	98 44 31	2847	97 11 4	2865	95 38 0	2884
29	a Arietis W.	91 25 57	2640	93 3 58	2656	94 41 37	2672	96 18 55	2687
	Aldebaran W.	60 25 9	2714	62 1 30	2727	63 37 34	2739	65 13 22	2752
	Pollux W.	16 44 44	2663	18 22 13	2672	19 59 30	2681	21 36 35	2692
	Regulus E.	20 19 52	2623	18 41 28	2640	17 3 28	2657	15 25 50	2674
	Venus E.	57 8 15	2642	55 30 17	2659	53 52 42	2677	52 15 31	2693
	Sun E.	87 58 26	2971	86 27 37	2989	84 57 10	3006	83 27 4	3022
30	Aldebaran W.	73 8 10	2815	74 42 19	2828	76 16 11	2839	77 49 49	2851
	Pollux W.	29 38 15	2751	31 13 47	2763	32 49 4	2775	34 24 5	2786
	Venus E.	44 15 1	2773	42 39 58	2789	41 5 15	2803	39 30 51	2818
	Sun E.	76 1 32	3100	74 33 23	3115	73 5 31	3129	71 37 57	3144
31	Aldebaran W.	85 34 10	2908	87 6 19	2919	88 38 14	2929	90 9 56	2940
	Pollux W.	42 15 26	2842	43 48 59	2853	45 22 18	2863	46 55 24	2873
	Venus E.	31 43 26	2886	30 10 49	2899	28 38 29	2912	27 6 25	2924
	Sun E.	64 24 19	3211	62 58 23	3223	61 32 41	3236	60 7 14	3248

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Midnight.			P.L. of Diff.			XVh.			P.L. of Diff.			XVIIIh.			P.L. of Diff.			XXIh.			P.L. of Diff.		
			o	/	//	o	/	//	o	/	//	o	/	//	o	/	//	o	/	//	o	/	//	o	/	//
23	Regulus	E.	98	54	11	1983			97	0	10	1989			95	6	18	1996			93	12	37	2003		
24	Fomalhaut	W.	93	50	50	2316			95	36	26	2329			97	21	43	2343			99	6	40	2358		
	a Pegasi	W.	71	52	22	2309			73	38	8	2315			75	23	45	2323			77	9	11	2332		
	a Arietis	W.	28	32	19	2148			30	22	5	2149			32	11	50	2161			34	1	31	2157		
	Pollux	E.	46	58	36	2056			45	6	29	2068			43	14	41	2080			41	23	11	2093		
	Regulus	E.	83	47	20	2049			81	55	2	2060			80	3	1	2072			78	11	19	2084		
	Venus	E.	120	39	23	2025			118	46	27	2036			116	53	49	2049			115	1	31	2062		
25	Fomalhaut	W.	107	45	28	2450			109	27	51	2472			111	9	44	2495			112	51	5	2519		
	a Pegasi	W.	85	52	47	2389			87	36	37	2403			89	20	7	2418			91	3	16	2434		
	a Arietis	W.	43	7	22	2200			44	55	49	2212			46	43	58	2225			48	31	48	2238		
	Pollux	E.	32	10	57	2167			30	21	40	2184			28	32	48	2201			26	44	22	2219		
	Regulus	E.	68	57	40	2152			67	8	0	2167			65	18	43	2182			63	29	49	2198		
	Venus	E.	105	45	23	2136			103	55	19	2152			102	5	39	2169			100	16	24	2186		
	Sun	E.	133	0	25	2474			131	18	36	2490			129	27	8	2505			127	56	2	2521		
26	a Pegasi	W.	99	33	4	2524			101	13	44	2544			102	53	56	2564			104	33	40	2585		
	a Arietis	W.	57	25	52	2311			59	11	35	2327			60	56	55	2343			62	41	52	2358		
	Aldebaran	W.	27	36	13	2628			29	14	30	2609			30	53	13	2594			32	32	16	2586		
	Pollux	E.	17	49	29	2329			16	4	12	2357			14	19	36	2393			12	35	51	2436		
	Regulus	E.	54	31	15	2380			52	44	46	2396			50	58	41	2314			49	13	2	2331		
	Venus	E.	91	16	36	2274			89	29	58	2292			87	43	47	2311			85	58	3	2329		
	Sun	E.	119	36	18	2607			117	57	33	2625			116	19	12	2613			114	41	16	2662		
27	a Arietis	W.	71	20	42	2442			73	3	17	2459			74	45	28	2476			76	27	15	2493		
	Aldebaran	W.	40	48	53	2588			42	28	4	2595			44	7	6	2602			45	45	58	2611		
	Regulus	E.	40	31	1	2418			38	47	52	2436			37	5	8	2453			35	22	48	2470		
	Venus	E.	77	16	7	2423			75	33	5	2441			73	50	29	2460			72	8	19	2480		
	Sun	E.	106	37	47	2754			105	2	19	2772			103	27	15	2791			101	52	36	2810		
28	a Arietis	W.	84	50	19	2577			86	29	46	2592			88	8	52	2608			89	47	36	2625		
	Aldebaran	W.	53	56	58	2665			55	34	25	2677			57	11	36	2689			58	48	31	2702		
	Regulus	E.	26	57	15	2556			25	17	19	2573			23	37	47	2590			21	58	38	2607		
	Venus	E.	63	44	6	2572			62	4	32	2589			60	25	22	2607			58	46	36	2625		
	Sun	E.	94	5	20	2902			92	33	3	2919			91	1	8	2937			89	29	36	2954		
29	a Arietis	W.	97	55	53	2702			99	32	31	2717			101	8	49	2731			102	44	47	2745		
	Aldebaran	W.	66	48	53	2765			68	24	7	2778			69	59	4	2790			71	33	45	2802		
	Pollux	W.	23	13	26	2703			24	50	2	2715			26	26	22	2727			28	2	26	2738		
	Regulus	E.	13	48	35	2692			12	11	44	2711			10	35	18	2732			8	59	20	2757		
	Venus	E.	50	38	42	2710			49	2	15	2726			47	26	9	2742			45	50	25	2757		
	Sun	E.	81	57	18	3038			80	27	52	3054			78	58	46	3069			77	29	59	3086		
30	Aldebaran	W.	79	23	11	2863			80	56	18	2874			82	29	10	2886			84	1	47	2897		
	Pollux	W.	35	58	51	2798			37	33	22	2809			39	7	38	2821			40	41	39	2832		
	Venus	E.	37	56	46	2832			36	22	59	2846			34	49	31	2859			33	16	20	2873		
	Sun	E.	70	10	41	3158			68	43	41	3172			67	16	58	3185			65	50	31	3198		
31	Aldebaran	W.	91	41	24	2950			93	12	40	2960			94	43	43	2970			96	14	34	2979		
	Pollux	W.	48	28	17	2883			50	0	58	2892			51	33	27	2901			53	5	44	2910		
	Venus	E.	25	34	36	2935			24	3	2	2946			22	31	42	2958			21	0	37	2970		
	Sun	E.	58	42	1	3259			57	17	1	3270			55	52	14	3282			54	27	41	3291		

## AT APPARENT NOON.

MEAN  
TIME.

## THE SUN'S

THE  
MOON'S

Day of the Week.	Day of the Month.	THE SUN'S					Equation of Time, to be sub. fm. Apparent Time.	Diff. for 1 h.	THE MOON'S		
		Apparent Rt. Ascen.	Diff. for 1 h.	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.			Age.	Meri- dian Pas- sage.	
		h m s	s	° ' "	" ' "	' "	m s	s	d	h m	
Fri.	1	14 24 3·62	9·8	S.14 19 0·8	48·1	16 8·7	16 15·32	0·050	24·9	21 0	
Sat.	2	14 27 58·98	9·8	14 38 15·6	47·5	16 9·0	16 16·51	0·015	25·9	21 40	
Sun.	3	14 31 55·16	9·9	14 57 16·3	46·9	16 9·3	16 16·88	0·019	26·9	22 20	
Mo.	4	14 35 52·17	9·9	15 16 2·3	46·3	16 9·5	16 16·43	0·054	27·9	23 1	
Tu.	5	14 39 50·02	9·9	15 34 33·3	45·7	16 9·8	16 15·14	0·088	28·9	23 45	
We.	6	14 43 48·70	10·0	15 52 48·9	45·0	16 10·0	16 13·02	0·123	0·2	0	♂
Th.	7	14 47 48·21	10·0	16 10 48·5	44·3	16 10·2	16 10·07	0·158	1·2	0 31	
Fri.	8	14 51 48·57	10·1	16 28 31·8	43·6	16 10·5	16 6·28	0·193	2·2	1 20	
Sat.	9	14 55 49·78	10·1	16 45 58·5	42·9	16 10·7	16 1·66	0·228	3·2	2 11	
Sun.	10	14 59 51·82	10·1	17 3 7·9	42·2	16 10·9	15 56·19	0·262	4·2	3 4	
Mo.	11	15 3 54 69	10·2	17 19 59·8	41·4	16 11·2	15 49·89	0·297	5·2	3 56	
Tu.	12	15 7 58·40	10·2	17 36 33·7	40·7	16 11·4	15 42·76	0·332	6·2	4 47	
We.	13	15 12 2·95	10·2	17 52 49·2	39·9	16 11·6	15 34·79	0·366	7·2	5 36	
Th.	14	15 16 8·32	10·3	18 8 46·0	39·1	16 11·8	15 26·00	0·400	8·2	6 24	
Fri.	15	15 20 14·51	10·3	18 24 23·5	38·3	16 12·0	15 16·39	0·435	9·2	7 11	
Sat.	16	15 24 21·53	10·3	18 39 41·5	37·4	16 12·3	15 5·95	0·470	10·2	7 58	
Sun.	17	15 28 29·38	10·4	18 54 39·6	36·6	16 12·5	14 54·68	0·504	11·2	8 46	
Mo.	18	15 32 38·06	10·4	19 9 17·4	35·7	16 12·7	14 42·59	0·538	12·2	9 38	
Tu.	19	15 36 47·55	10·4	19 23 34·6	34·8	16 12·9	14 29·68	0·572	13·2	10 33	
We.	20	15 40 57·87	10·5	19 37 30·7	34·0	16 13·1	14 15·96	0·605	14·2	11 34	
Th.	21	15 45 9·00	10·5	19 51 5·5	33·1	16 13·3	14 1·43	0·639	15·2	12 40	
Fri.	22	15 49 20·95	10·5	20 4 18·7	32·1	16 13·5	13 46·09	0·672	16·2	13 47	
Sat.	23	15 53 33·69	10·6	20 17 9·8	31·2	16 13·6	13 29·95	0·705	17·2	14 51	
Sun.	24	15 57 47·22	10·6	20 29 38·6	30·3	16 13·8	13 13·03	0·738	18·2	15 51	
Mo.	25	16 2 1·55	10·6	20 41 44·6	29·3	16 14·0	12 55·31	0·770	19·2	16 45	
Tu.	26	16 6 16·65	10·7	20 53 27·6	28·3	16 14·2	12 36·82	0·802	20·2	17 33	
We.	27	16 10 32·51	10·7	21 4 47·2	27·3	16 14·3	12 17·57	0·833	21·2	18 18	
Th.	28	16 14 49·12	10·7	21 15 43·0	26·3	16 14·5	11 57·57	0·864	22·2	18 59	
Fri.	29	16 19 6·46	10·8	21 26 14·7	25·3	16 14·6	11 36·84	0·893	23·2	19 39	
Sat.	30	16 23 24·51	10·8	21 36 22·1	24·3	16 14·8	11 15·41	0·922	24·2	20 19	
Sun.	31	16 27 43·25		S.21 46 4·6		16 14·9	10 53·28		25·2	21 0	

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.	THE MOON'S							
		Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Fri.	1	15 1'0	14 57'1	55 6'6	54 52'2	11 5 58	11 27 37	5 43 20N	2 50 19N
Sat.	2	14 53'7	14 50'7	54 39'6	54 28'6	11 49 1	12 10 16	0 2 57S.	2 55 5S
Sun.	3	14 48'2	14 46'1	54 19'5	54 11'7	12 31 32	12 52 55	5 44 48	8 30 47
Mo.	4	14 44'4	14 43'0	54 5'5	54 0'4	13 14 31	13 36 28	11' 11 42	13 46 14
Tu.	5	14 42'1	14 41'5	53 57'0	53 54'8	13 58 50	14 21 43	16 12 56	18 30 24
We.	6	14 41'2	14 41'3	53 53'9	53 54'2	14 45 10	15 9 15	20 37 6	22 31 31
Th.	7	14 41'8	14 42'6	53 55'9	53 58'9	15 33 57	15 59 18	24 12 8	25 37 26
Fri.	8	14 43'8	14 45'3	54 3'1	54 8'8	16 25 13	16 51 40	26 46 1	27 36 39
Sat.	9	14 47'3	14 49'7	54 16'2	54 24'8	17 18 31	17 45 39	28 8 15	28 20 3
Sun.	10	14 52'5	14 55'8	54 35'2	54 47'3	18 12 57	18 40 14	28 11 33	27 42 36
Mo.	11	14 59'6	15 3'9	55 1'2	55 16'9	19 7 24	19 34 18	26 53 21	25 44 17
Tu.	12	15 8'7	15 14'1	55 34'7	55 54'6	20 0 53	20 27 4	24 16 7	22 29 49
We.	13	15 20'0	15 26'3	56 16'1	56 39'3	20 52 51	21 18 14	20 26 32	18 7 29
Th.	14	15 33'1	15 40'3	57 4'3	57 30'5	21 43 17	22 8 4	15 34 4	12 47 43
Fri.	15	15 47'7	15 55'3	57 57'7	58 25'6	22 32 41	22 57 16	9 50 2	6 42 44
Sat.	16	16 2'9	16 10'4	58 53'6	59 21'2	23 21 55	23 46 49	3 27 41S.	0 6 58S.
Sun.	17	16 17'5	16 24'2	59 47'3	60 11'7	0 12 7	0 37 58	3 17 2N.	6 41 37N
Mo.	18	16 30'1	16 35'1	60 33'3	60 51'7	1 4 33	1 32 2	10 3 45	13 20 0
Tu.	19	16 39'1	16 41'9	61 6'3	61 16'6	2 0 31	2 30 7	16 26 36	19 19 30
We.	20	16 43'3	16 43'5	61 22'0	61 22'5	3 0 52	3 32 43	21 54 31	24 7 30
Th.	21	16 42'2	16 39'6	61 17'8	61 8'2	4 5 32	4 39 5	25 54 45	27 13 12
Fri.	22	16 35'7	16 30'7	60 53'8	60 35'5	5 13 1	5 46 57	28 0 49	28 16 47
Sat.	23	16 24'7	16 18'0	60 13'7	59 48'8	6 20 29	6 53 14	28 1 36	27 16 57
Sun.	24	16 10'6	16 2'7	59 21'7	58 53'0	7 24 55	7 55 21	26 5 28	24 30 25
Mo.	25	15 54'8	15 46'7	58 23'8	57 54'2	8 24 26	8 52 10	22 35 16	20 23 33
Tu.	26	15 38'8	15 31'2	57 25'1	56 57'1	9 18 36	9 43 53	17 58 33	15 23 14
We.	27	15 23'9	15 17'2	56 30'6	56 5'7	10 8 7	10 31 29	12 40 15	9 51 51
Th.	28	15 10'9	15 5'3	55 42'9	55 22'3	10 54 7	11 16 12	7 0 0	4 6 22N.
Fri.	29	15 0'3	14 55'9	55 4'0	54 47'9	11 37 52	11 59 18	1 12 29N.	1 40 21S.
Sat.	30	14 52'2	14 49'1	54 34'1	54 22'8	12 20 36	12 41 56	4 30 52S.	7 17 52S.
Sun.	31	14 46'6	14 44'6	54 13'5	54 6'4				

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.			P.L. of Diff.			IIIh.			P.L. of Diff.			VIh.			P.L. of Diff.			IXh.			P.L. of Diff.		
			°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
1	Pollux	W.	54	37	50	2919	56	9	45	2928	57	41	29	2935	59	13	3	2943								
	Regulus	W.	17	45	24	2920	19	17	18	2928	20	49	2	2935	22	20	36	2942								
	Sun	E.	53	3	19	3302	51	39	10	3313	50	15	13	3323	48	51	28	3332								
2	Pollux	W.	66	48	31	2979	68	19	10	2985	69	49	42	2991	71	20	6	2997								
	Regulus	W.	29	56	15	2976	31	26	58	2982	32	57	33	2989	34	28	0	2994								
	Sun	E.	41	55	23	3378	40	32	41	3386	39	10	9	3395	37	47	47	3404								
3	Pollux	W.	78	50	26	3022	80	20	11	3026	81	49	51	3031	83	19	25	3035								
	Regulus	W.	41	58	37	3019	43	28	26	3024	44	58	9	3028	46	27	47	3031								
8	Sun	W.	23	57	23	3517	25	17	28	3507	26	37	44	3498	27	58	10	3491								
	Fomalhaut	E.	81	24	43	3336	80	1	13	3336	78	37	43	3336	77	14	13	3336								
	a Pegasi	E.	103	19	16	3307	101	55	12	3301	100	31	1	3296	99	6	44	3290								
9	Sun	W.	34	42	29	3453	36	3	46	3446	37	25	11	3439	38	46	44	3431								
	Saturn	W.	12	48	11	3664	14	5	36	3549	15	25	6	3462	16	46	13	3394								
	Fomalhaut	E.	70	16	54	3342	68	53	31	3343	67	30	9	3345	66	6	56	3348								
	a Pegasi	E.	92	3	53	3266	90	39	2	3262	89	14	6	3257	87	49	4	3252								
10	Sun	W.	45	36	36	3392	46	59	2	3385	48	21	36	3375	49	44	21	3366								
	Saturn	W.	23	47	1	3198	25	13	12	3173	26	39	53	3151	28	7	1	3131								
	Fomalhaut	E.	59	11	13	3369	57	48	21	3375	56	25	36	3382	55	2	59	3391								
	a Pegasi	E.	80	42	34	3230	79	17	0	3225	77	51	21	3221	76	25	37	3217								
11	Sun	W.	56	40	42	3319	58	4	32	3307	59	28	35	3297	60	52	50	3285								
	Saturn	W.	35	28	11	3048	36	57	25	3032	38	26	58	3017	39	56	49	3004								
	Mars	W.	16	10	6	3312	17	34	4	3286	18	58	32	3263	20	23	27	3242								
	Fomalhaut	E.	48	12	43	3452	46	51	25	3470	45	30	27	3490	44	9	52	3513								
	a Pegasi	E.	69	15	45	3198	67	49	33	3194	66	23	17	3192	64	56	58	3188								
	a Arietis	E.	110	49	4	2952	109	17	51	2943	107	46	26	2932	106	14	48	2922								
12	Sun	W.	67	57	32	3224	69	23	13	3211	70	49	9	3198	72	15	21	3183								
	Saturn	W.	47	30	28	2932	49	2	6	2918	50	34	2	2904	52	6	16	2889								
	Mars	W.	27	33	42	3153	29	0	47	3138	30	28	11	3121	31	55	55	3105								
	Fomalhaut	E.	37	34	45	3694	36	17	51	3747	35	1	54	3811	33	47	3	3884								
	a Pegasi	E.	57	44	41	3182	56	18	10	3183	54	51	40	3184	53	25	12	3186								
	a Arietis	E.	98	33	13	2865	97	0	9	2854	95	26	51	2841	93	53	16	2828								
13	Sun	W.	79	30	41	3109	80	58	40	3093	82	26	58	3077	83	55	36	3060								
	Saturn	W.	59	52	15	2812	61	26	27	2797	63	0	59	2781	64	35	52	2765								
	Mars	W.	39	19	29	3023	40	49	13	3007	42	19	17	2990	43	49	42	2973								
	a Pegasi	E.	46	14	8	3222	44	48	25	3236	43	22	58	3252	41	57	50	3272								
	a Arietis	E.	86	1	6	2760	84	25	45	2746	82	50	6	2731	81	14	7	2716								
14	Sun	W.	91	23	59	2974	92	54	44	2956	94	25	52	2938	95	57	23	2920								
	Saturn	W.	72	35	42	2681	74	12	48	2663	75	50	17	2646	77	28	10	2628								
	Mars	W.	51	27	18	2884	52	59	57	2866	54	33	0	2847	56	6	27	2829								
	a Pegasi	E.	34	59	54	3453	33	38	37	3512	32	18	26	3583	30	59	33	3669								
	a Arietis	E.	73	9	7	2638	71	31	3	2621	69	52	37	2605	68	13	49	2588								
	Aldebaran	E.	104	25	56	2690	102	49	3	2672	101	11	46	2654	99	34	4	2637								
15	Sun	W.	103	40	53	2825	105	14	48	2806	106	49	8	2787	108	23	53	2768								
	Saturn	W.	85	43	38	2539	87	23	57	2520	89	4	42	2502	90	45	53	2484								
	Mars	W.	63	59	46	2734	65	35	41	2715	67	12	1	2695	68	48	48	2676								

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Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	Pollux W.	60 44 27	2951	62 15 41	2958	63 46 46	2965	65 17 43	2972
	Regulus W.	23 52 2	2950	25 23 18	2956	26 54 26	2963	28 25 25	2970
	Sun E.	47 27 53	3342	46 4 30	3351	44 41 17	3360	43 18 15	3369
2	Pollux W.	72 50 23	3002	74 20 33	3007	75 50 37	3013	77 20 34	3017
	Regulus W.	35 58 21	3000	37 28 34	3005	38 58 41	3009	40 28 42	3014
	Sun E.	36 25 35	3412	35 3 32	3421	33 41 39	3429	32 19 55	3438
3	Pollux W.	84 48 55	3039	86 18 19	3042	87 47 40	3046	89 16 56	3049
	Regulus W.	47 57 21	3035	49 26 50	3039	50 56 14	3043	52 25 34	3046
8	Sun W.	29 18 44	3482	30 39 28	3475	32 0 20	3467	33 21 21	3461
	Fomalhaut E.	75 50 43	3337	74 27 14	3338	73 3 46	3339	71 40 19	3340
	a Pegasi E.	97 42 21	3286	96 17 53	3281	94 53 19	3276	93 28 39	3271
9	Sun W.	40 8 26	3424	41 30 15	3416	42 52 13	3408	44 14 20	3401
	Saturn W.	18 8 37	3339	19 32 4	3294	20 56 22	3258	22 21 23	3226
	Fomalhaut E.	64 43 34	3352	63 20 22	3355	61 57 14	3359	60 34 11	3364
	a Pegasi E.	86 23 56	3248	84 58 43	3244	83 33 26	3239	82 8 3	3234
10	Sun W.	51 7 16	3358	52 30 21	3349	53 53 36	3339	55 17 3	3328
	Saturn W.	29 34 33	3113	31 2 27	3096	32 30 42	3079	33 59 17	3064
	Fomalhaut E.	53 40 32	3400	52 18 15	3410	50 56 10	3423	49 34 19	3436
	a Pegasi E.	74 59 48	3213	73 33 54	3209	72 7 55	3205	70 41 52	3202
11	Sun W.	62 17 19	3274	63 42 1	3262	65 6 57	3250	66 32 7	3237
	Saturn W.	41 26 57	2989	42 57 23	2976	44 28 6	2961	45 59 8	2946
	Mars W.	21 48 47	3223	23 14 29	3204	24 40 33	3187	26 6 57	3170
	Fomalhaut E.	42 49 42	3541	41 30 3	3571	40 10 57	3606	38 52 29	3647
	a Pegasi E.	63 30 35	3186	62 4 9	3183	60 37 40	3182	59 11 10	3183
	a Arietis E.	104 42 57	2911	103 10 52	2901	101 38 34	2889	100 6 1	2877
12	Sun W.	73 41 50	3169	75 8 36	3154	76 35 40	3140	78 3 1	3124
	Saturn W.	53 38 49	2873	55 11 42	2859	56 44 53	2844	58 18 24	2828
	Mars W.	33 23 58	3089	34 52 21	3073	36 21 3	3056	37 50 6	3040
	Fomalhaut E.	32 33 27	3969	31 21 17	4069	30 10 45	4185	29 2 5	4327
	a Pegasi E.	51 58 46	3190	50 32 25	3195	49 6 10	3203	47 40 4	3211
	a Arietis E.	92 19 25	2815	90 45 16	2802	89 10 51	2788	87 36 7	2775
13	Sun W.	85 24 35	3043	86 53 54	3026	88 23 34	3009	89 53 35	2991
	Saturn W.	66 11 6	2748	67 46 42	2732	69 22 39	2715	70 58 59	2698
	Mars W.	45 20 29	2955	46 51 38	2938	48 23 9	2920	49 55 2	2902
	a Pegasi E.	40 33 6	3297	39 8 51	3326	37 45 10	3360	36 22 8	3402
	a Arietis E.	79 37 48	2701	78 1 9	2685	76 24 9	2670	74 46 49	2654
14	Sun W.	97 29 17	2901	99 1 35	2882	100 34 17	2863	102 7 23	2845
	Saturn W.	79 6 27	2610	80 45 8	2593	82 24 13	2575	84 3 43	2556
	Mars W.	57 40 17	2810	59 14 32	2791	60 49 12	2772	62 24 17	2753
	a Pegasi E.	29 42 13	3773	28 26 43	3898	27 13 21	4050	26 2 31	4232
	a Arietis E.	66 34 38	2572	64 55 5	2555	63 15 8	2538	61 34 48	2522
	Aldebaran E.	97 55 59	2618	96 17 29	2601	94 38 35	2583	92 59 16	2565
15	Sun W.	109 59 3	2749	111 34 38	2730	113 10 38	2711	114 47 4	2692
	Saturn W.	92 27 29	2465	94 9 31	2448	95 51 58	2430	97 34 50	2412
	Mars W.	70 26 0	2656	72 3 39	2637	73 41 43	2618	75 20 14	2599

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Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
15	<i>a</i> Arietis E.	59 54 6	2505	58 12 59	2489	56 31 30	2471	54 49 36	2455
	Aldebaran E.	91 19 33	2546	89 39 24	2529	87 58 51	2511	86 17 53	2493
16	<i>Sun</i> W.	116 23 55	2673	118 1 11	2655	119 38 52	2636	121 16 58	2618
	Saturn W.	99 18 8	2394	101 1 52	2375	102 46 2	2358	104 30 37	2341
	Mars W.	76 59 11	2580	78 38 34	2561	80 18 23	2541	81 58 39	2522
	<i>a</i> Aquilæ W.	55 52 1	13513	57 12 11	13447	58 33 34	13387	59 56 5	13331
	<i>a</i> Arietis E.	46 14 23	2375	44 30 13	2360	42 45 41	2346	41 0 49	2333
	Aldebaran E.	77 46 51	2406	76 3 25	2390	74 19 36	2373	72 35 22	2357
17	<i>Sun</i> W.	129 33 33	2532	131 14 2	2516	132 54 53	2501	134 36 5	2486
	Mars W.	90 26 20	2433	92 9 8	2416	93 52 20	2400	95 35 55	2383
	<i>a</i> Aquilæ W.	67 3 51	3096	68 32 6	3057	70 1 8	3022	71 30 54	2987
	Fomalhaut W.	39 10 37	2918	40 42 33	2850	42 15 56	2789	43 50 39	2732
	<i>a</i> Arietis E.	32 11 54	2379	30 25 24	2272	28 38 44	2270	26 52 0	2268
	Aldebaran E.	63 48 39	2283	62 2 15	2270	60 15 32	2258	58 28 31	2247
	Pollux E.	106 34 48	2196	104 46 15	2179	102 57 16	2163	101 7 53	2149
18	Mars W.	104 19 30	2309	106 5 16	2296	107 51 21	2284	109 37 44	2272
	<i>a</i> Aquilæ W.	79 9 29	2851	80 42 51	2831	82 16 39	2811	83 50 52	2794
	Fomalhaut W.	52 0 55	2516	53 41 46	2483	55 23 23	2453	57 5 43	2424
	<i>a</i> Pegasi W.	31 29 6	3038	32 58 32	2932	34 30 10	2840	36 3 46	2760
	Aldebaran E.	49 29 40	2204	47 41 19	2200	45 52 52	2197	44 4 20	2196
	Pollux E.	91 55 22	2078	90 3 49	2065	88 11 56	2053	86 19 44	2041
19	<i>a</i> Aquilæ W.	91 46 37	2741	93 22 23	2736	94 58 15	2734	96 34 10	2734
	Fomalhaut W.	65 46 24	2316	67 32 0	2300	69 18 0	2285	71 4 22	2272
	<i>a</i> Pegasi W.	44 14 24	2483	45 56 1	2445	47 38 32	2411	49 21 51	2380
	Aldebaran E.	35 2 30	2231	33 14 48	2249	31 27 34	2273	29 40 55	2304
	Pollux E.	76 54 40	1995	75 0 58	1988	73 7 4	1981	71 12 59	1975
	Regulus E.	113 45 33	1990	111 51 43	1982	109 57 41	1976	108 3 29	1971
20	Fomalhaut W.	80 0 5	2232	81 47 45	2228	83 35 31	2226	85 23 20	2226
	<i>a</i> Pegasi W.	58 7 48	2276	59 54 23	2263	61 41 17	2252	63 28 28	2242
	<i>a</i> Arietis W.	14 30 49	2314	16 16 28	2239	18 3 57	2186	19 52 46	2147
	Pollux E.	61 40 49	1959	59 46 10	1958	57 51 29	1958	55 56 49	1960
	Regulus E.	98 30 37	1953	96 35 48	1952	94 40 58	1952	92 46 8	1953
21	Fomalhaut W.	94 21 59	2243	96 9 23	2249	97 56 37	2258	99 43 38	2269
	<i>a</i> Pegasi W.	72 26 56	2222	74 14 51	2223	76 2 45	2225	77 50 35	2229
	<i>a</i> Arietis W.	29 7 24	2063	30 59 21	2059	32 51 24	2056	34 43 31	2056
	Pollux E.	46 24 20	1977	44 30 10	1984	42 36 10	1990	40 42 20	1999
	Regulus E.	83 12 38	1967	81 18 12	1973	79 23 56	1980	77 29 50	1987
22	<i>a</i> Pegasi W.	86 47 48	2266	88 34 38	2277	90 21 12	2289	92 7 28	2302
	<i>a</i> Arietis W.	44 3 11	2080	45 54 41	2088	47 45 58	2098	49 37 0	2109
	Aldebaran W.	15 56 17	3150	17 23 26	3951	18 54 40	2805	20 29 2	2698
	Pollux E.	31 16 52	2052	29 24 39	2066	27 32 48	2082	25 41 21	2098
	Regulus E.	68 2 30	2034	66 9 49	2045	64 17 25	2057	62 25 19	2070
	Venus E.	115 35 54	2260	113 48 56	2275	112 2 19	2288	110 16 2	2302
23	<i>a</i> Arietis W.	58 47 47	2173	60 36 56	2186	62 25 44	2202	64 14 8	2219
	Aldebaran W.	28 46 44	3457	30 28 58	2440	32 11 36	2429	33 54 29	2423
	Regulus E.	53 10 4	2141	51 20 8	2157	49 30 36	2174	47 41 29	2191

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Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
15	<i>a</i> Arietis E.	53 7 20	2438	51 24 40	2422	49 41 37	2407	47 58 12	2390
	Aldebaran E.	84 36 30	2475	82 54 42	2458	81 12 30	2441	79 29 53	2423
16	<i>Sun</i> W.	122 55 29	2600	124 34 24	2582	126 13 44	2566	127 53 26	2548
	Saturn W.	106 15 36	2324	108 1 0	2307	109 46 49	2291	111 33 2	2275
	Mars W.	83 39 21	2504	85 20 28	2487	87 2 0	2469	88 43 57	2450
	<i>a</i> Aquilæ W.	61 19 41	2378	62 44 18	2328	64 9 54	3181	65 36 26	3137
	<i>a</i> Arietis E.	39 15 37	2320	37 30 6	2307	35 44 17	2297	33 58 13	2287
	Aldebaran E.	70 50 46	2341	69 5 47	2326	67 20 25	2311	65 34 42	2298
17	<i>Sun</i> W.	136 17 38	2472	137 59 31	2459	139 41 42	2446	141 24 11	2434
	Mars W.	97 19 54	2367	99 4 16	2353	100 48 59	2337	102 34 4	2323
	<i>a</i> Aquilæ W.	73 1 23	2955	74 32 32	2927	76 4 17	2899	77 36 37	2874
	Fomalhaut W.	45 26 36	2681	47 3 41	2635	48 41 49	2592	50 20 55	2553
	<i>a</i> Arietis E.	25 5 14	2272	23 18 34	2281	21 32 7	2297	19 46 3	2322
	Aldebaran E.	56 41 13	2237	54 53 40	2227	53 5 52	2218	51 17 51	2211
	Pollux E.	99 18 8	2133	97 27 59	2118	95 37 28	2105	93 46 36	2090
18	Mars W.	111 24 25	2261	113 11 22	2251	114 58 34	2241	116 46 1	2232
	<i>a</i> Aquilæ W.	85 25 28	2779	87 0 23	2767	88 35 34	2756	90 11 0	2747
	Fomalhaut W.	58 48 43	2398	60 32 20	2375	62 16 31	2353	64 1 13	2333
	<i>a</i> Pegasi W.	37 39 6	2690	39 15 59	2629	40 54 15	2574	42 33 46	2525
	Aldebaran E.	42 15 47	2197	40 27 15	2201	38 38 49	2207	36 50 32	2217
	Pollux E.	84 27 14	2031	82 34 28	2021	80 41 27	2011	78 48 10	2003
19	<i>a</i> Aquilæ W.	98 10 5	2736	99 45 57	2741	101 21 43	2747	102 57 20	2757
	Fomalhaut W.	72 51 2	2262	74 37 58	2252	76 25 9	2243	78 12 32	2237
	<i>a</i> Pegasi W.	51 5 54	2354	52 50 35	2331	54 35 50	2309	56 21 36	2291
	Aldebaran E.	27 55 1	2344	26 10 5	2395	24 26 23	2460	22 44 13	2545
	Pollux E.	69 18 46	1970	67 24 25	1967	65 29 58	1963	63 35 25	1961
	Regulus E.	106 9 9	1965	104 14 40	1961	102 20 4	1958	100 25 23	1955
20	Fomalhaut W.	87 11 9	2226	88 58 58	2227	90 46 45	2231	92 34 26	2237
	<i>a</i> Pegasi W.	65 15 53	2235	67 3 29	2229	68 51 13	2225	70 39 3	2223
	<i>a</i> Arietis W.	21 42 34	2117	23 33 7	2097	25 24 11	2081	27 15 39	2070
	Pollux E.	54 2 11	1961	52 7 35	1964	50 13 4	1967	48 18 38	1972
	Regulus E.	90 51 19	1953	88 56 31	1956	87 1 48	1960	85 7 10	1963
21	Fomalhaut W.	101 30 23	2281	103 16 50	2294	105 2 58	2309	106 48 45	2325
	<i>a</i> Pegasi W.	79 38 20	2233	81 25 58	2239	83 13 27	2247	85 0 44	2256
	<i>a</i> Arietis W.	36 35 38	2058	38 27 41	2061	40 19 40	2067	42 11 30	2073
	Pollux E.	38 48 44	2007	36 55 21	2017	35 2 14	2028	33 9 24	2040
	Regulus E.	75 35 55	1995	73 42 13	2003	71 48 44	2012	69 55 29	2023
22	<i>a</i> Pegasi W.	93 53 25	2316	95 39 1	2331	97 24 15	2348	99 9 5	2365
	<i>a</i> Arietis W.	51 27 46	2120	53 18 15	2132	55 8 25	2145	56 58 16	2158
	Aldebaran W.	22 5 45	2617	23 44 17	2558	25 24 10	2514	27 5 4	2481
	Pollux E.	23 50 18	2116	21 59 43	2136	20 9 38	2157	18 20 6	2182
	Regulus E.	60 33 33	2083	58 42 8	2098	56 51 5	2111	55 0 23	2126
	Venus E.	108 30 6	2317	106 44 31	2333	104 59 19	2348	103 14 30	2364
23	<i>a</i> Arietis W.	66 2 8	2234	67 49 45	2251	69 36 56	2268	71 23 42	2285
	Aldebaran W.	35 37 31	2420	37 20 37	2421	39 3 41	2424	40 46 42	2429
	Regulus E.	45 52 48	2208	44 4 32	2225	42 16 42	2243	40 29 19	2261

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Day of the Month.	Star's Name and Position.	Noon.	P. L. of Diff.	IIIh.	P. L. of Diff.	VIh.	P. L. of Diff.	IXh.	P. L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
23	Venus E.	101 30 4	2382	99 46 3	2399	98 2 27	2417	96 19 17	2436
	Spica ♍ E.	107 10 26	2142	105 20 31	2158	103 31 0	2174	101 41 53	2190
	Jupiter E.	121 4 38	2226	119 16 49	2241	117 29 23	2257	115 42 20	2273
24	α Arietis W.	73 10 3	2303	74 55 58	2322	76 41 26	2340	78 26 28	2358
	Aldebaran W.	42 29 35	2437	44 12 17	2445	45 54 48	2453	47 37 4	2467
	Regulus E.	38 42 22	2279	36 55 52	2298	35 9 49	2317	33 24 14	2335
	Venus E.	87 50 8	2533	86 9 41	2554	84 29 43	2574	82 50 13	2596
	Spica ♍ E.	92 42 44	2279	90 56 14	2298	89 10 11	2316	87 24 35	2335
	Jupiter E.	106 53 17	2361	105 8 46	2380	103 24 42	2398	101 41 4	2417
	Sun E.	132 25 4	2629	130 46 49	2647	129 8 58	2666	127 31 33	2686
25	α Arietis W.	87 4 52	2453	88 47 12	2472	90 29 4	2491	92 10 30	2510
	Aldebaran W.	56 4 5	2535	57 44 27	2550	59 24 31	2566	61 4 13	2582
	Pollux W.	12 27 50	2527	14 8 26	2525	15 49 4	2530	17 29 36	2539
	Regulus E.	21 43 14	2432	23 0 25	2452	21 18 4	2471	19 36 10	2492
	Venus E.	74 39 57	2702	73 3 20	2724	71 27 12	2745	69 51 32	2767
	Spica ♍ E.	78 43 28	2431	77 0 37	2450	75 18 13	2469	73 36 16	2489
	Jupiter E.	93 9 42	2513	91 28 47	2533	89 48 19	2552	88 8 18	2572
	Sun E.	119 31 0	2785	117 56 12	2805	116 21 51	2825	114 47 56	2845
26	Aldebaran W.	69 17 9	2665	70 54 36	2681	72 31 42	2698	74 8 25	2715
	Pollux W.	25 48 21	2606	27 27 8	2622	29 5 33	2638	30 43 36	2654
	Venus E.	62 0 17	2874	60 27 25	2895	58 55 0	2916	57 23 1	2937
	Spica ♍ E.	65 13 11	2583	63 33 52	2601	61 54 58	2619	60 16 29	2637
	Jupiter E.	79 54 52	2668	78 17 29	2687	76 40 31	2705	75 3 58	2724
	Sun E.	107 4 50	2946	105 33 29	2965	104 2 32	2985	102 32 0	3005
27	Aldebaran W.	82 6 30	2796	83 41 3	2811	85 15 16	2828	86 49 8	2843
	Pollux W.	38 48 29	2734	40 24 24	2749	41 59 59	2765	43 35 13	2779
	Venus E.	49 49 39	3039	48 20 14	3058	46 51 13	3078	45 22 36	3097
	Spica ♍ E.	52 10 1	2723	50 33 52	2739	48 58 4	2755	47 22 37	2771
	Jupiter E.	67 7 15	2812	65 33 3	2830	63 59 14	2847	62 25 47	2863
	Sun E.	95 5 16	3097	93 37 3	3115	92 9 11	3132	90 41 40	3149
28	Pollux W.	51 26 39	2850	53 0 2	2863	54 33 9	2876	56 5 59	2888
	Regulus W.	14 32 33	2848	16 5 59	2860	17 39 9	2873	19 12 3	2884
	Venus E.	38 5 23	3192	36 39 3	3210	35 13 6	3230	33 47 32	3248
	Spica ♍ E.	39 30 24	2844	37 56 53	2858	36 23 40	2871	34 50 44	2884
	Jupiter E.	54 43 40	2941	53 12 13	2956	51 41 5	2970	50 10 15	2984
	Sun E.	83 29 1	3228	82 3 25	3243	80 38 7	3258	79 13 6	3271
29	Pollux W.	63 46 22	2944	65 17 45	2954	66 48 55	2964	68 19 53	2973
	Regulus W.	26 52 51	2940	28 24 19	2950	29 55 35	2960	31 26 38	2969
	Venus E.	26 45 23	3350	25 22 9	3372	23 59 20	3396	22 36 59	3423
	Spica ♍ E.	27 10 0	2943	25 38 35	2954	24 7 24	2964	22 36 26	2974
	Jupiter E.	42 40 23	3052	41 11 14	3065	39 42 21	3077	38 13 43	3090
	Sun E.	72 11 53	3335	70 48 22	3346	69 25 4	3358	68 1 59	3368
30	Pollux W.	75 52 0	3014	77 21 56	3020	78 51 44	3027	80 21 23	3033
	Regulus W.	38 59 12	3009	40 29 14	3016	41 59 7	3022	43 28 52	3029
	Jupiter E.	30 54 26	3154	29 27 22	3168	28 0 35	3183	26 34 5	3198
	Sun E.	61 9 25	3416	59 47 26	3423	58 25 36	3431	57 3 55	3439

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			° ' "		° ' "		° ' "		° ' "	
23	Venus E.		94 36 33	2455	92 54 16	2474	91 12 26	2493	89 31 3	2513
	Spica ♀ E.		99 53 11	2208	98 4 55	2225	96 17 5	2243	94 29 41	2261
	Jupiter E.		113 55 41	2290	112 9 27	2307	110 23 38	2325	108 38 15	2342
24	α Arietis W.		80 11 3	2377	81 55 11	2396	83 38 52	2415	85 22 5	2434
	Aldebaran W.		49 19 4	2479	51 0 47	2492	52 42 12	2506	54 23 17	2520
	Regulus E.		31 39 6	2355	29 54 26	2374	28 10 14	2394	26 26 30	2413
	Venus E.		81 11 12	2617	79 32 40	2638	77 54 37	2660	76 17 3	2681
	Spica ♀ E.		85 39 27	2354	83 54 46	2373	82 10 32	2392	80 26 46	2412
	Jupiter E.		99 57 53	2436	98 15 10	2455	96 32 53	2474	94 51 4	2494
	Sun E.		125 54 34	2705	124 18 1	2725	122 41 54	2745	121 6 14	2765
25	α Arietis W.		93 51 29	2530	95 32 1	2548	97 12 7	2568	98 51 46	2587
	Aldebaran W.		62 43 33	2598	64 22 31	2615	66 1 6	2632	67 39 18	2647
	Pollox W.		19 9 55	2549	20 50 0	2562	22 29 47	2577	24 9 14	2591
	Regulus E.		17 54 45	2511	16 13 47	2531	14 33 17	2551	12 53 15	2572
	Venus E.		68 16 21	2789	66 41 38	2810	65 7 23	2833	63 33 36	2853
	Spica ♀ E.		71 54 47	2507	70 13 44	2526	68 33 7	2545	66 52 56	2564
	Jupiter E.		86 28 44	2591	84 49 37	2610	83 10 56	2629	81 32 41	2649
	Sun E.		113 14 27	2866	111 41 24	2886	110 8 47	2906	108 36 36	2926
26	Aldebaran W.		75 44 45	2731	77 20 44	2747	78 56 21	2764	80 31 36	2786
	Pollux W.		32 21 18	2670	33 58 38	2687	35 35 36	2702	37 12 13	2718
	Venus E.		55 51 29	2958	54 20 23	2978	52 49 43	2999	51 19 29	3018
	Spica ♀ E.		58 38 24	2655	57 0 43	2672	55 23 26	2689	53 46 32	2707
	Jupiter E.		73 27 50	2741	71 52 5	2760	70 16 45	2778	68 41 48	2796
	Sun E.		101 1 53	3023	99 32 9	3042	98 2 48	3061	96 33 51	3080
27	Aldebaran W.		88 22 40	2858	89 55 53	2873	91 28 47	2887	93 1 22	2902
	Pollux W.		45 10 8	2794	46 44 44	2809	48 19 0	2822	49 52 59	2837
	Venus E.		43 54 23	3116	42 26 33	3136	40 59 7	3154	39 32 3	3173
	Spica ♀ E.		45 47 31	2786	44 12 45	2802	42 38 19	2816	41 4 12	2831
	Jupiter E.		60 52 41	2879	59 19 55	2895	57 47 30	2911	56 15 25	2927
	Sun E.		89 14 30	3165	87 47 39	3182	86 21 8	3197	84 54 55	3213
28	Pollux W.		57 38 33	2900	59 10 52	2912	60 42 56	2923	62 14 46	2934
	Regulus W.		20 44 42	2896	22 17 6	2908	23 49 15	2919	25 21 10	2930
	Venus E.		32 22 20	3268	30 57 31	3288	29 33 5	3307	28 9 2	3328
	Spica ♀ E.		33 18 4	2897	31 45 41	2909	30 13 33	2920	28 41 39	2931
	Jupiter E.		48 39 42	2998	47 9 27	3012	45 39 29	3026	44 9 48	3039
	Sun E.		77 48 21	3285	76 23 52	3298	74 59 38	3310	73 35 38	3323
29	Pollux W.		69 50 40	2982	71 21 15	2990	72 51 40	2998	74 21 55	3006
	Regulus W.		32 57 30	2977	34 28 11	2985	35 58 42	2994	37 29 2	3002
	Venus E.		21 15 8	3452	19 53 50	3485	18 33 5	3523	17 13 10	3567
	Spica ♀ E.		21 5 40	2984	19 35 7	2993	18 4 46	3003	16 34 37	3013
	Jupiter E.		36 45 21	3102	35 17 14	3115	33 49 23	3128	32 21 47	3140
	Sun E.		66 39 6	3378	65 16 24	3388	63 53 54	3398	62 31 35	3406
30	Pollux W.		81 50 55	3039	83 20 20	3044	84 49 38	3050	86 18 49	3054
	Regulus W.		44 58 29	3038	46 27 59	3040	47 57 22	3045	49 26 39	3049
	Jupiter E.		25 7 54	3215	23 42 3	3234	22 16 34	3255	20 51 30	3279
	Sun E.		55 42 22	3446	54 20 57	3453	52 59 40	3460	51 38 31	3465

## AT APPARENT NOON.

MEAN  
TIME.THE  
MOON'S

Day of the Week.	Day of the Month.	THE SUN'S						Equation of Time, to be subt. from added to Apparent Time.	Diff. for 1 h.	THE MOON'S	
		Apparent Rt. Ascen.	Diff. for 1 h.	Apparent Declination.	Diff. for 1 h.	Semidi- ameter.				Age.	Meri- dian Pas- sage.
		h m s	s	° ' "	"	' "	m s	s		d	h m
Sun.	1	16 27 43.25	10.81	S.21 46 4.6	23.2	16 14.9	10 53.28	0.950	25.2	21 0	
Mo.	2	16 32 2.66	10.84	21 55 22.2	23.2	16 15.1	10 30.48	0.977	26.2	21 42	
Tu.	3	16 36 22.73	10.86	22 4 14.5	21.1	16 15.2	10 7.04	1.003	27.2	22 28	
We.	4	16 40 43.41	10.89	22 12 41.1	20.0	16 15.3	9 42.98	1.027	28.2	23 16	
Th.	5	16 45 4.69	10.91	22 20 41.9	19.0	16 15.5	9 18.33	1.051	29.2	♂	
Fri.	6	16 49 26.54	10.93	22 28 16.6	17.9	16 15.6	8 53.11	1.073	0.4	0 7	
Sat.	7	16 53 48.91	10.95	22 35 24.9	16.7	16 15.7	8 27.37	1.094	1.4	1 0	
Sun.	8	16 58 11.79	10.97	22 42 6.6	15.6	16 15.8	8 1.12	1.113	2.4	1 52	
Mo.	9	17 2 35.15	10.99	22 48 21.5	14.5	16 16.0	7 34.41	1.131	3.4	2 44	
Tu.	10	17 6 58.93	11.01	22 54 9.3	13.4	16 16.1	7 7.27	1.148	4.4	3 33	
We.	11	17 11 23.11	11.02	22 59 30.0	12.2	16 16.2	6 39.72	1.164	5.4	4 21	
Th.	12	17 15 47.66	11.04	23 4 23.3	11.1	16 16.3	6 11.79	1.177	6.4	5 6	
Fri.	13	17 20 12.55	11.05	23 8 49.0	9.9	16 16.4	5 43.54	1.190	7.4	5 52	
Sat.	14	17 24 37.74	11.06	23 12 47.0	8.8	16 16.5	5 14.98	1.202	8.4	6 38	
Sun.	15	17 29 3.21	11.07	23 16 17.3	7.6	16 16.6	4 46.14	1.212	9.4	7 26	
Mo.	16	17 33 28.94	11.08	23 19 19.6	6.4	16 16.7	4 17.05	1.220	10.4	8 17	
Tu.	17	17 37 54.87	11.09	23 21 54.0	5.3	16 16.8	3 47.76	1.228	11.4	9 14	
We.	18	17 42 20.99	11.10	23 24 0.3	4.1	16 16.8	3 18.28	1.235	12.4	10 16	
Th.	19	17 46 47.27	11.10	23 25 38.4	2.9	16 16.9	2 48.64	1.240	13.4	11 22	
Fri.	20	17 51 13.68	11.10	23 26 48.4	1.7	16 17.0	2 18.88	1.244	14.4	12 28	
Sat.	21	17 55 40.18	11.11	23 27 30.2	0.6	16 17.0	1 49.02	1.247	15.4	13 32	
Sun.	22	18 0 6.75	11.11	23 27 43.8	0.6	16 17.1	1 19.10	1.248	16.4	14 31	
Mo.	23	18 4 33.34	11.11	23 27 29.0	1.8	16 17.1	0 49.15	1.248	17.4	15 23	
Tu.	24	18 8 59.94	11.11	23 26 46.0	3.0	16 17.2	0 19.19	1.247	18.4	16 11	
We.	25	18 13 26.50	11.11	23 25 34.7	4.2	16 17.2	0 10.73	1.244	19.4	16 54	
Th.	26	18 17 53.01	11.10	23 23 55.0	5.3	16 17.2	0 40.59	1.241	20.4	17 36	
Fri.	27	18 22 19.43	11.10	23 21 47.2	6.5	16 17.3	1 10.38	1.236	21.4	18 16	
Sat.	28	18 26 45.72	11.09	23 19 11.1	7.7	16 17.3	1 40.04	1.229	22.4	18 57	
Sun.	29	18 31 11.85	11.08	23 16 6.8	8.9	16 17.3	2 9.54	1.221	23.4	19 39	
Mo.	30	18 35 37.80	11.07	23 12 34.5	10.0	16 17.3	2 38.85	1.212	24.4	20 24	
Tu.	31	18 40 3.52	11.06	23 8 34.2	11.2	16 17.3	3 7.93	1.202	25.4	21 11	
We.	32	18 44 29.00		S.23 4 6.0		16 17.3	3 36.77		26.4	22 1	

## MEAN TIME.

## THE MOON'S

Day of the Week.	Day of the Month.	Semidiameter.		Hor. Parallax.		Right Ascension.		Declination.	
		Noon.	Midn.	Noon.	Midn.	Noon.	Midn.	Noon.	Midn.
		' "	' "	' "	' "	h m s	h m s	° ' "	° ' "
Sun.	1	14 46.6	14 44.6	54 13.5	54 6.4	13 3 24	13 25 9	10 0 12S.	12 36 37S.
Mo.	2	14 43.2	14 42.3	54 12.5	53 57.9	13 47 16	14 9 52	15 5 52	17 26 37
Tu.	3	14 41.9	14 41.9	53 56.4	53 56.4	14 33 1	14 56 47	19 37 28	21 36 54
We.	4	14 42.4	14 43.2	53 58.0	54 0.9	15 21 13	15 46 19	23 23 25	24 55 26
Th.	5	14 44.3	14 45.7	54 5.0	54 10.4	16 12 4	16 38 23	26 11 26	27 10 2
Fri.	6	14 47.6	14 49.6	54 17.1	54 24.6	17 5 12	17 32 22	27 49 57	28 10 15
Sat.	7	14 52.0	14 54.6	54 33.3	54 43.0	17 59 46	18 27 12	28 10 15	27 49 38
Sun.	8	14 57.6	15 0.8	54 53.8	55 5.6	18 54 32	19 21 37	27 8 32	26 7 23
Mo.	9	15 4.3	15 8.2	55 18.7	55 32.7	19 48 20	20 14 36	24 47 0	23 8 25
Tu.	10	15 12.3	15 16.8	55 47.9	56 4.5	20 40 23	21 5 41	21 12 56	19 1 57
We.	11	15 21.6	15 26.8	56 22.0	56 41.1	21 30 31	21 54 57	16 36 59	13 59 35
Th.	12	15 32.2	15 38.0	57 1.0	57 22.1	22 19 52	22 43 0	11 11 20	8 13 52
Fri.	13	15 44.0	15 50.2	57 44.1	58 6.8	23 6 52	23 30 48	5 8 53S.	1 58 9S.
Sat.	14	15 56.4	16 2.6	58 29.6	58 52.5	23 54 57	0 19 30	1 16 26N.	4 32 46N.
Sun.	15	16 8.8	16 14.7	59 15.3	59 36.8	0 44 37	1 10 27	7 48 29	11 1 3
Mo.	16	16 20.1	16 25.0	59 56.8	60 14.5	1 37 11	2 4 58	14 7 27	17 4 24
Tu.	17	16 29.1	16 32.3	60 29.7	60 41.6	2 33 53	3 4 1	19 48 17	22 15 16
We.	18	16 34.6	16 35.7	60 49.8	60 53.9	3 35 21	4 7 46	24 21 25	26 3 1
Th.	19	16 35.6	16 34.4	60 53.7	60 49.2	4 41 4	5 14 55	27 16 49	28 0 26
Fri.	20	16 32.0	16 28.3	60 40.2	60 26.9	5 48 57	6 22 43	28 12 36	27 53 23
Sat.	21	16 23.7	16 18.1	60 9.9	59 49.4	6 55 51	7 28 12	7 4 7	25 47 11
Sun.	22	16 11.8	16 4.8	59 26.1	59 0.6	7 58 59	8 28 37	24 5 49	22 3 39
Mo.	23	15 57.5	15 49.9	58 33.7	58 6.0	8 56 53	9 23 52	19 44 25	17 11 42
Tu.	24	15 42.2	15 31.6	57 37.5	57 9.8	9 49 38	10 14 20	14 28 49	11 38 40
We.	25	15 27.2	15 20.3	56 42.7	56 17.2	10 38 7	11 1 9	8 43 50	5 46 27N.
Th.	26	15 13.7	15 7.7	55 53.0	55 30.9	11 23 36	11 45 37	2 48 23N.	0 8 45S.
Fri.	27	15 2.3	14 57.6	55 11.1	54 53.8	12 7 22	12 28 58	3 3 33S.	5 54 47
Sat.	28	14 53.6	14 50.2	54 39.2	54 26.8	12 50 36	13 12 21	8 41 14	11 21 48
Sun.	29	14 47.5	14 45.7	54 17.0	54 10.1	13 34 23	13 56 48	13 55 18	16 20 34
Mo.	30	14 44.4	14 43.8	54 5.5	54 3.2	14 19 41	14 43 8	18 36 23	20 41 20
Tu.	31	14 43.7	14 44.2	54 2.8	54 4.8	15 7 12	15 31 57	22 34 6	24 13 10S.
We.	32	14 45.3	14 46.8	54 8.7	54 14.2	15 57 21		25 37 5S.	

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
1	Pollux W.	87 47 55	3058	89 16 56	3062	90 45 52	3066	92 14 43	3069
	Regulus W.	50 55 51	3054	52 24 57	3058	53 53 58	3061	55 22 55	3065
	Sun E.	50 17 28	3472	48 56 32	3477	47 35 42	3481	46 14 57	3487
2	Pollux W.	99 38 7	3082	101 6 39	3083	102 35 10	3083	104 3 40	3085
	Regulus W.	62 46 47	3076	64 15 26	3078	65 44 3	3078	67 12 39	3080
	Spica ♀ W.	78 50 22	3108	10 18 22	3102	11 46 29	3098	13 14 41	3095
	Sun E.	39 32 37	3509	38 12 23	3514	36 52 14	3518	35 32 10	3522
3	Regulus W.	74 35 28	3079	76 4 3	3079	77 32 38	3078	79 1 14	3077
	Spica ♀ W.	20 36 25	3087	22 4 51	3085	23 33 19	3083	25 1 49	3082
8	Sun W.	26 40 47	3380	28 3 26	3365	29 26 22	3352	30 49 33	3340
	Fomalhaut E.	50 51 7	3416	49 29 9	3434	48 7 31	3453	46 46 14	3474
	a Pegasi E.	71 54 10	3179	70 27 36	3177	69 1 0	3175	67 34 21	3174
9	Sun W.	37 49 0	3281	39 13 34	3270	40 38 21	3259	42 3 21	3247
	Fomalhaut E.	40 6 53	3632	38 48 53	3677	37 31 41	3730	36 15 26	3790
	a Pegasi E.	60 21 0	3177	58 54 23	3179	57 27 48	3182	56 1 17	3186
	a Arietis E.	101 24 28	2888	99 51 54	2880	98 19 10	2871	96 46 14	2863
10	Sun W.	49 11 41	3191	50 38 1	3179	52 4 35	3168	53 31 22	3156
	Mars W.	15 37 16	3129	17 4 50	3111	18 32 46	3093	20 1 4	3077
	a Pegasi E.	48 50 22	3225	47 24 42	3237	45 59 17	3252	44 34 9	3270
	a Arietis E.	88 58 50	2818	87 24 46	2808	85 50 29	2799	84 16 0	2789
11	Sun W.	60 48 58	3095	62 17 14	3083	63 45 45	3069	65 14 33	3056
	Mars W.	27 27 13	3005	28 57 20	2991	30 27 44	2977	31 58 25	2964
	a Pegasi E.	37 34 57	3413	36 12 55	3458	34 51 44	3511	33 31 32	3573
	a Arietis E.	76 20 17	2738	74 44 27	2726	73 8 22	2716	71 32 3	2705
	Aldebaran E.	107 39 30	2794	106 4 54	2782	104 30 2	2769	102 54 53	2757
12	Sun W.	72 42 36	2987	74 13 5	2973	75 43 51	2959	77 14 55	2945
	a Aquilæ W.	43 30 30	4599	44 32 56	4468	45 37 16	4351	46 43 22	4243
	Mars W.	39 36 9	2894	41 8 36	2880	42 41 21	2866	44 14 24	2851
	a Arietis E.	63 26 41	2646	61 48 49	2635	60 10 42	2622	58 32 17	2611
	Aldebaran E.	94 54 59	2693	93 18 9	2679	91 41 1	2666	90 3 35	2653
13	Sun W.	84 54 54	2870	86 27 52	2855	88 1 9	2839	89 34 46	2823
	a Aquilæ W.	52 37 11	3809	53 52 4	3740	55 8 9	3675	56 25 23	3614
	Mars W.	52 4 25	2776	53 39 24	2761	55 14 43	2746	56 50 21	2730
	a Arietis E.	50 16 7	2550	48 36 3	2538	46 55 42	2525	45 15 4	2514
	Aldebaran E.	81 51 59	2586	80 12 45	2573	78 33 13	2559	76 53 22	2546
14	Sun W.	97 27 57	2745	99 3 37	2730	100 39 37	2714	102 15 59	2698
	Mars W.	64 53 47	2652	66 31 31	2637	68 9 36	2621	69 48 2	2605
	a Aquilæ W.	63 6 50	3360	64 29 52	3318	65 53 43	3278	67 18 20	3241
	Fomalhaut W.	35 26 17	3318	36 50 8	3231	38 15 41	3153	39 42 46	3083
	a Arietis E.	36 48 0	2461	35 5 52	2452	33 23 31	2445	31 41 0	2438
	Aldebaran E.	68 29 37	2482	66 47 58	2470	65 6 2	2457	63 23 48	2445
	Pollux E.	111 17 24	2402	109 33 52	2387	107 49 58	2373	106 5 44	2357
15	Sun W.	110 22 58	2622	112 1 23	2607	113 40 9	2592	115 19 15	2578
	Mars W.	78 5 33	2529	79 46 6	2514	81 27 0	2499	83 8 15	2484
	a Aquilæ W.	74 31 48	3081	76 0 21	3055	77 29 26	3030	78 59 2	3006

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
			° / "		° / "		° / "		° / "	
1	Pollux	W.	93 43 30	3072	95 12 14	3075	96 40 54	3077	98 9 32	3079
	Regulus	W.	56 51 48	3068	58 20 37	3070	59 49 23	3073	61 18 6	3074
	Sun	E.	44 54 19	3492	43 33 46	3497	42 13 18	3501	40 52 55	3506
2	Pollux	W.	105 32 8	3085	107 0 36	3086	108 29 3	3086	109 57 30	3086
	Regulus	W.	68 41 13	3080	70 9 47	3080	71 38 21	3081	73 6 54	3080
	Spica $\pi$	W.	14 42 57	3092	16 11 16	3091	17 39 37	3089	19 8 0	3087
	Sun	E.	34 12 10	3527	32 52 16	3531	31 32 26	3535	30 12 41	3541
3	Regulus	W.	80 29 52	3076	81 58 31	3074	83 27 12	3072	84 55 56	3071
	Spica $\pi$	W.	26 30 21	3079	27 58 56	3078	29 27 33	3076	30 56 12	3074
8	Sun	W.	32 12 58	3327	33 36 38	3315	35 0 32	3304	36 24 39	3292
	Fomalhaut	E.	45 25 21	3498	44 4 54	3525	42 44 58	3556	41 25 36	3592
	a Pegasi	E.	66 7 41	3174	64 41 1	3173	63 14 20	3173	61 47 39	3175
9	Sun	W.	43 28 35	3237	44 54 1	3225	46 19 41	3214	47 45 34	3202
	Fomalhaut	E.	35 0 14	3859	33 46 13	3939	32 23 33	4032	31 22 25	4139
	a Pegasi	E.	54 34 51	3191	53 8 31	3197	51 42 18	3205	50 16 15	3214
	a Arietis	E.	95 13 8	2855	93 39 51	2845	92 6 22	2837	90 32 42	2828
10	Sun	W.	54 58 24	3144	56 25 40	3132	57 53 11	3119	59 20 57	3107
	Mars	W.	21 29 42	3062	22 58 38	3048	24 27 52	3033	25 57 24	3019
	a Pegasi	E.	43 9 22	3290	41 44 59	3314	40 21 4	3343	38 57 42	3375
	a Arietis	E.	82 41 18	2779	81 6 23	2769	79 31 15	2759	77 55 53	2748
11	Sun	W.	66 43 36	3043	68 12 56	3030	69 42 32	3015	71 12 26	3002
	Mars	W.	33 29 23	2950	35 0 38	2936	36 32 11	2923	38 4 1	2909
	a Pegasi	E.	32 12 28	3645	30 54 42	3731	29 38 28	3833	28 24 0	3955
	a Arietis	E.	69 55 30	2693	68 18 41	2681	66 41 36	2671	65 4 17	2658
	Aldebaran	E.	101 19 28	2744	99 43 47	2731	98 7 48	2718	96 31 32	2705
12	Sun	W.	78 46 17	2930	80 17 58	2916	81 49 57	2900	83 22 16	2885
	a Aquilæ	W.	47 51 8	4142	49 0 29	4049	50 11 20	3964	51 23 35	3884
	Mars	W.	45 47 46	2837	47 21 26	2821	48 55 26	2806	50 29 46	2791
	a Arietis	E.	56 53 37	2598	55 14 39	2586	53 35 25	2574	51 55 55	2561
	Aldebaran	E.	88 25 52	2640	86 47 51	2627	85 9 32	2613	83 30 54	2600
13	Sun	W.	91 8 44	2808	92 43 1	2792	94 17 39	2777	95 52 37	2760
	a Aquilæ	W.	57 43 42	3557	59 3 3	3504	60 23 23	3453	61 44 40	3406
	Mars	W.	58 26 21	2715	60 2 41	2699	61 39 22	2684	63 16 24	2668
	a Arietis	E.	43 34 11	2502	41 53 1	2492	40 11 36	2480	38 29 55	2470
	Aldebaran	E.	75 13 13	2534	73 32 47	2520	71 52 2	2507	70 10 58	2495
14	Sun	W.	103 52 42	2683	105 29 45	2668	107 7 8	2652	108 44 53	2637
	Mars	W.	71 26 50	2590	73 5 59	2575	74 45 29	2559	76 25 20	2543
	a Aquilæ	W.	68 43 41	3205	70 9 44	3171	71 36 28	3139	73 3 50	3110
	Fomalhaut	W.	41 11 16	3019	42 41 5	2960	44 12 8	2907	45 44 18	2857
	a Arietis	E.	29 58 19	2433	28 15 31	2430	26 32 39	2430	24 49 47	2433
	Aldebaran	E.	61 41 18	2434	59 58 32	2423	58 15 30	2412	56 32 13	2402
	Pollux	E.	104 21 8	2342	102 36 10	2328	100 50 52	2314	99 5 13	2299
15	Sun	W.	116 58 40	2564	118 38 24	2550	120 18 28	2537	121 58 50	2523
	Mars	W.	84 49 51	2470	86 31 47	2455	88 14 3	2442	89 56 38	2428
	a Aquilæ	W.	80 29 7	2985	81 59 38	2965	83 30 35	2946	85 1 56	2929

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of Diff.	IIIh.	P.L. of Diff.	VIh.	P.L. of Diff.	IXh.	P.L. of Diff.
		° ' "		° ' "		° ' "		° ' "	
15	Fomalhaut W.	47 17 32	2811	48 51 45	2769	50 26 53	2731	52 2 52	2694
	a Pegasi W.	27 13 35	3593	28 32 17	3436	29 53 53	3301	31 18 4	3183
	a Arietis E.	23 6 59	2441	21 24 22	2453	19 42 3	2476	18 0 16	2510
	Aldebaran E.	54 48 41	2393	53 4 56	2385	51 20 59	2376	49 36 50	2369
	Pollux E.	97 19 12	2285	95 32 50	2271	93 46 8	2257	91 59 5	2243
16	Sun W.	123 39 31	2511	125 20 29	2500	127 1 43	2487	128 43 15	2476
	Mars W.	91 39 33	2415	93 22 46	2402	95 6 18	2389	96 50 8	2377
	a Aquilæ W.	86 33 38	2914	88 5 39	2900	89 37 58	2887	91 10 33	2877
	Fomalhaut W.	60 14 7	2543	61 54 20	2519	63 35 7	2496	65 16 26	2475
	a Pegasi W.	38 49 7	2780	40 24 1	2723	42 0 10	2673	43 37 26	2627
	Aldebaran E.	40 54 10	2354	39 9 29	2357	37 24 52	2362	35 40 23	2370
	Pollux E.	82 58 48	2178	81 9 47	2166	79 20 28	2154	77 30 51	2142
17	Mars W.	105 33 26	2324	107 18 51	2315	109 4 29	2306	110 50 20	2298
	Fomalhaut W.	73 49 57	2387	75 33 50	2373	77 18 3	2361	79 2 34	2350
	a Pegasi W.	51 57 36	2454	53 39 54	2428	55 22 48	2405	57 6 16	2383
	Aldebaran E.	27 3 7	2492	25 21 42	2543	23 41 28	2609	22 2 45	2696
	Pollux E.	68 18 38	2092	66 27 27	2084	64 36 3	2075	62 44 26	2068
	Regulus E.	105 9 31	2085	103 18 8	2079	101 26 36	2070	99 34 50	2062
18	Fomalhaut W.	87 48 39	2311	89 34 22	2307	91 20 11	2305	93 6 3	2303
	a Pegasi W.	65 50 28	2303	67 36 23	2292	69 22 35	2282	71 9 1	2273
	a Arietis W.	22 18 20	2180	24 7 18	2156	25 56 52	2136	27 46 56	2120
	Pollux E.	53 23 51	2041	51 31 20	2037	49 38 44	2035	47 46 4	2033
	Regulus E.	90 13 16	2033	88 20 33	2028	86 27 42	2025	84 34 47	2022
19	a Pegasi W.	80 3 37	2251	81 50 49	2251	83 38 0	2252	85 25 10	2254
	a Arietis W.	37 1 53	2079	38 53 24	2076	40 45 0	2074	42 36 39	2075
	Pollux E.	38 22 22	2035	36 29 42	2038	34 37 7	2042	32 44 38	2048
	Regulus E.	75 9 32	2020	73 16 29	2022	71 23 29	2024	69 30 32	2027
20	a Arietis W.	51 54 24	2089	53 45 40	2094	55 36 48	2101	57 27 45	2109
	Aldebaran W.	22 26 49	2573	24 6 21	2511	25 47 19	2462	27 29 26	2425
	Pollux E.	23 24 53	2093	21 33 43	2107	19 42 54	2125	17 52 33	2145
	Regulus E.	60 7 27	2054	58 15 17	2061	56 23 18	2070	54 31 33	2079
21	a Arietis W.	66 39 14	2158	68 28 45	2170	70 17 58	2182	72 6 52	2196
	Aldebaran W.	36 9 40	2341	37 54 39	2337	39 39 44	2336	41 24 51	2337
	Regulus E.	45 16 29	2132	43 26 19	2145	41 36 29	2159	39 46 59	2172
	Spica ♏ E.	99 17 9	2134	97 27 1	2146	95 37 12	2159	93 47 43	2173
	Jupiter E.	118 40 39	2212	116 52 29	2223	115 4 36	2235	113 17 1	2249
	Venus E.	119 25 16	2502	117 44 6	2515	116 3 14	2528	114 22 40	2542
22	a Arietis W.	81 6 10	2269	82 52 55	2286	84 39 15	2302	86 25 12	2319
	Aldebaran W.	50 9 3	2370	51 53 21	2381	53 37 23	2392	55 21 9	2405
	Regulus E.	30 44 51	2248	28 57 35	2264	27 10 43	2281	25 24 16	2298
	Spica ♏ E.	84 45 41	2248	82 58 25	2264	81 11 33	2281	79 25 6	2298
	Jupiter E.	104 24 18	2323	102 38 52	2340	100 53 50	2356	99 9 12	2373
	Venus E.	106 4 57	2622	104 26 32	2639	102 48 30	2657	101 10 52	2675
23	Aldebaran W.	63 55 13	2477	65 36 59	2493	67 18 22	2509	68 59 23	2526
	Pollux W.	20 27 1	2429	22 9 54	2442	23 52 29	2456	25 34 45	2471
	Spica ♏ E.	70 39 15	2388	68 55 23	2406	67 11 57	2424	65 28 57	2443

## MEAN TIME.

## LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
		° / "		° / "		° / "		° / "	
15	Fomalhaut W.	53 39 40	2659	55 17 15	2627	56 55 33	2598	58 34 31	2570
	a Pegasi W.	32 44 33	3081	34 13 6	2991	35 43 30	2912	37 15 34	2842
	a Arietis E.	16 19 16	2561	14 39 28	2641	13 1 28	2763	11 26 11	2960
	Aldebaran E.	47 52 31	2364	46 8 4	2359	44 23 30	2355	42 38 51	2354
	Pollux E.	90 11 41	2229	88 23 57	2217	86 35 54	2203	84 47 31	2190
16	Sun W.	130 25 2	2465	132 7 4	2455	133 49 20	2446	135 31 49	2438
	Mars W.	98 34 15	2366	100 18 39	2355	102 3 19	2344	103 48 15	2333
	a Aquilæ W.	92 43 21	2868	94 16 21	2861	95 49 30	2853	97 22 45	2852
	Fomalhaut W.	66 58 15	2455	68 40 32	2436	70 23 16	2418	72 6 25	2402
	a Pegasi W.	45 15 44	2585	46 54 59	2548	48 35 5	2514	50 15 59	2483
	Aldebaran E.	33 56 5	2383	32 12 6	2400	30 28 31	2422	28 45 28	2452
	Pollux E.	75 40 56	2132	73 50 45	2121	72 0 18	2111	70 9 36	2101
17	Mars W.	112 36 22	2291	114 22 35	2283	116 8 59	2277	117 55 32	2273
	Fomalhaut W.	80 47 21	2339	82 32 23	2330	84 17 38	2323	86 3 4	2317
	a Pegasi W.	58 50 15	2364	60 34 42	2346	62 19 35	2330	64 4 51	2315
	Aldebaran E.	20 25 59	2811	18 51 45	2965	17 20 48	3175	15 54 9	3468
	Pollux E.	60 52 38	2062	59 0 40	2055	57 8 32	2050	55 16 15	2045
	Regulus E.	97 42 52	2054	95 50 42	2048	93 58 22	2042	92 5 53	2037
18	Fomalhaut W.	94 51 58	2302	96 37 54	2304	98 23 48	2306	100 9 38	2309
	a Pegasi W.	72 55 40	2266	74 42 29	2261	76 29 26	2257	78 16 29	2254
	a Arietis W.	29 37 24	2108	31 28 11	2098	33 19 14	2090	35 10 29	2084
	Pollux E.	45 53 21	2031	44 0 35	2032	42 7 50	2032	40 15 5	2033
	Regulus E.	82 41 47	2021	80 48 45	2019	78 55 41	2019	77 2 36	2019
19	a Pegasi W.	87 12 18	2257	88 59 21	2262	90 46 17	2267	92 33 6	2273
	a Arietis W.	44 28 17	2075	46 19 55	2077	48 11 30	2080	50 3 0	2084
	Pollux E.	30 52 18	2053	29 0 7	2061	27 8 8	2070	25 16 23	2080
	Regulus E.	67 37 40	2032	65 44 55	2036	63 52 17	2041	61 59 47	2048
20	a Arietis W.	59 18 30	2117	61 9 3	2126	62 59 22	2136	64 49 26	2147
	Aldebaran W.	29 12 25	2396	30 56 6	2375	32 40 16	2359	34 24 50	2348
	Pollux E.	16 2 43	2172	14 13 33	2207	12 25 16	2255	10 38 10	2328
	Regulus E.	52 40 1	2088	50 48 44	2098	48 57 42	2109	47 6 57	2120
21	a Arietis W.	73 55 26	2209	75 43 40	2224	77 31 32	2239	79 19 2	2254
	Aldebaran W.	43 9 56	2340	44 54 57	2346	46 39 49	2353	48 24 32	2361
	Regulus E.	37 57 49	2186	36 9 1	2201	34 20 35	2216	32 32 31	2232
	Spica ♏ E.	91 58 34	2187	90 9 47	2202	88 21 22	2217	86 33 20	2233
	Jupiter E.	111 29 47	2262	109 42 52	2277	107 56 19	2292	106 10 7	2307
	Venus E.	112 42 25	2557	111 2 31	2572	109 22 58	2588	107 43 46	2604
22	a Arietis W.	88 10 43	2336	89 55 50	2354	91 40 31	2372	93 24 46	2390
	Aldebaran W.	57 4 37	2418	58 47 46	2431	60 30 36	2446	62 13 5	2461
	Regulus E.	23 38 14	2315	21 52 37	2334	20 7 27	2352	18 22 43	2370
	Spica ♏ E.	77 39 4	2316	75 53 28	2334	74 8 18	2351	72 23 33	2370
	Jupiter E.	97 24 58	2390	95 41 9	2408	93 57 46	2426	92 14 48	2444
	Venus E.	99 33 39	2694	97 56 51	2714	96 20 29	2733	94 44 33	2752
23	Aldebaran W.	70 40 0	2543	72 20 13	2560	74 0 3	2578	75 39 28	2595
	Pollux W.	27 16 39	2486	28 58 12	2502	30 39 22	2519	32 20 9	2536
	Spica ♏ E.	63 46 24	2463	62 4 18	2482	60 22 39	2500	58 41 26	2519

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		No on.	P.L. of Diff.	IIIh.			P.L. of Diff.	VIh.			P.L. of Diff.	IXh.			P.L. of Diff.
			° / "		° / "				° / "				° / "			
23	Jupiter	E.	90 32 16	2463	88 50 10	2481	87 8 30	2500	85 27 17	2519						
	Venus	E.	93 9 2	2772	91 33 58	2793	89 59 21	2814	88 25 11	2834						
	Sun	E.	139 54 51	2754	138 19 23	2772	136 44 18	2790	135 9 37	2808						
24	Aldebaran	W.	77 18 30	2613	78 57 7	2631	80 35 20	2649	82 13 8	2667						
	Pollux	W.	34 0 32	2553	35 40 31	2570	37 20 7	2588	38 59 18	2605						
	Spica ♏	E.	57 0 39	2538	55 20 18	2556	53 40 23	2576	52 0 56	2594						
	Jupiter	E.	77 7 49	2615	75 29 14	2635	73 51 6	2654	72 13 24	2673						
	Venus	E.	80 41 3	2939	79 9 34	2960	77 38 31	2981	76 7 55	3003						
	Sun	E.	127 22 17	2904	125 50 3	2923	124 18 13	2943	122 46 48	2962						
25	Aldebaran	W.	90 16 8	2757	91 51 33	2775	93 26 34	2792	95 1 13	2810						
	Pollux	W.	47 9 17	2693	48 46 7	2710	50 22 34	2726	51 58 39	2744						
	Regulus	W.	10 12 59	2687	11 49 56	2705	13 26 30	2721	15 2 42	2737						
	Spica ♏	E.	43 49 50	2686	42 12 51	2703	40 36 15	2721	39 0 3	2738						
	Jupiter	E.	64 11 17	2768	62 36 7	2785	61 1 20	2804	59 26 58	2823						
	Venus	E.	68 41 29	3107	67 13 28	3128	65 45 52	3148	64 18 41	3168						
	Sun	E.	115 15 46	3057	113 46 44	3076	112 18 5	3095	110 49 49	3112						
26	Pollux	W.	59 53 39	2822	61 27 38	2837	63 1 18	2852	64 34 39	2866						
	Regulus	W.	22 58 25	2816	24 32 32	2831	26 6 20	2845	27 39 49	2860						
	Spica ♏	E.	31 4 35	2820	29 30 33	2835	27 56 51	2851	26 23 30	2866						
	Jupiter	E.	51 40 53	2910	50 8 47	2927	48 37 2	2943	47 5 38	2960						
	Venus	E.	57 8 41	3267	55 43 51	3285	54 19 22	3303	52 55 14	3322						
	Sun	E.	103 33 48	3199	102 7 37	3215	100 41 46	3231	99 16 13	3246						
27	Pollux	W.	72 17 1	2931	73 48 40	2943	75 20 5	2954	76 51 16	2965						
	Regulus	W.	35 22 46	2925	36 54 33	2937	38 26 5	2949	39 57 22	2959						
	Jupiter	E.	39 33 45	3040	38 4 22	3056	36 35 18	3071	35 6 33	3087						
	Venus	E.	45 59 53	3412	44 37 50	3429	43 16 6	3447	41 54 42	3464						
	Sun	E.	92 12 52	3317	90 49 0	3330	89 25 23	3342	88 2 0	3354						
28	Pollux	W.	84 23 56	3013	85 53 53	3020	87 23 41	3029	88 53 18	3035						
	Regulus	W.	47 30 35	3007	49 0 39	3015	50 30 33	3023	52 0 17	3031						
	Jupiter	E.	27 47 47	3173	26 21 5	3192	24 54 46	3213	23 28 53	3237						
	Venus	E.	35 12 35	3554	33 53 10	3572	32 34 5	3591	31 15 21	3612						
	Sun	E.	81 8 21	3407	79 46 12	3416	78 24 13	3424	77 2 24	3431						
29	Pollux	W.	96 19 24	3065	97 48 16	3069	99 17 4	3074	100 45 46	3077						
	Regulus	W.	59 26 55	3059	60 55 55	3064	62 24 49	3068	63 53 38	3072						
	Venus	E.	24 47 47	3741	23 31 43	3775	22 16 15	3815	21 1 28	3863						
	Sun	E.	70 15 22	3464	68 54 18	3470	67 33 20	3474	66 12 27	3479						
30	Regulus	W.	71 16 48	3083	72 45 19	3083	74 13 49	3084	75 42 18	3084						
	Spica ♏	W.	17 19 9	3096	18 47 23	3096	20 15 38	3094	21 43 55	3092						
	Sun	E.	59 29 2	3492	58 8 29	3494	56 47 58	3495	55 27 28	3496						
31	Regulus	W.	83 4 51	3079	84 33 26	3077	86 2 4	3074	87 30 45	3072						
	Spica ♏	W.	29 5 44	3084	30 34 13	3082	32 2 45	3078	33 31 21	3076						
	Sun	E.	48 45 1	3493	47 24 29	3491	46 3 55	3490	44 43 20	3488						

MEAN TIME.  
LUNAR DISTANCES.

Day of the Month	Star's Name and Position.		Midnight.	P.L. of Diff.	XVh.	P.L. of Diff.	XVIIIh.	P.L. of Diff.	XXIh.	P.L. of Diff.
			o / //		o / //		o / //		o / //	
23	Jupiter	E.	83 46 30	2538	82 6 10	2557	80 26 16	2577	78 46 49	2596
	Venus	E.	86 51 27	2855	85 18 11	2876	83 45 21	2898	82 12 59	2918
	Sun	E.	133 35 20	2827	132 1 27	2846	130 27 59	2866	128 54 56	2884
24	Aldebaran	W.	83 50 32	2685	85 27 32	2703	87 4 8	2721	88 40 20	2739
	Pollux	W.	40 38 6	2623	42 16 29	2641	43 54 29	2658	45 32 5	2676
	Spica $\mathfrak{M}$	E.	50 21 52	2613	48 43 14	2632	47 5 2	2649	45 27 14	2667
	Jupiter	E.	70 36 8	2692	68 59 17	2711	67 22 52	2730	65 46 52	2749
	Venus	E.	74 37 46	3024	73 8 3	3045	71 38 46	3066	70 9 55	3087
	Sun	E.	121 15 48	2981	119 45 12	3001	118 15 0	3019	116 45 11	3038
25	Aldebaran	W.	96 35 28	2826	98 9 22	2844	99 42 53	2860	101 16 3	2877
	Pollux	W.	53 34 21	2760	55 9 42	2776	56 44 42	2792	58 19 21	2808
	Regulus	W.	16 38 33	2753	18 14 3	2769	19 49 11	2785	21 23 58	2801
	Spica $\mathfrak{M}$	E.	37 24 13	2755	35 48 46	2772	34 13 41	2788	32 38 57	2805
	Jupiter	E.	57 53 0	2840	56 19 24	2858	54 46 11	2876	53 13 21	2893
	Venus	E.	62 51 54	3188	61 25 31	3208	59 59 31	3227	58 33 54	3247
	Sun	E.	109 21 54	3130	107 54 21	3148	106 27 10	3165	105 0 19	3182
26	Pollux	W.	66 7 42	2880	67 40 27	2894	69 12 54	2906	70 45 5	2918
	Regulus	W.	29 12 59	2874	30 45 51	2887	32 18 26	2901	33 50 44	2913
	Spica $\mathfrak{M}$	E.	24 50 28	2881	23 17 45	2895	21 45 20	2910	20 13 14	2924
	Jupiter	E.	45 34 35	2977	44 3 53	2992	42 33 30	3009	41 3 28	3024
	Venus	E.	51 31 28	3340	50 8 3	3359	48 44 59	3377	47 22 16	3394
	Sun	E.	97 50 58	3261	96 26 1	3277	95 1 22	3290	93 36 59	3304
27	Pollux	W.	78 22 13	2975	79 52 57	2985	81 23 28	2994	82 53 48	3004
	Regulus	W.	41 28 26	2969	42 59 17	2980	44 29 55	2989	46 0 21	2999
	Jupiter	E.	33 38 8	3103	32 10 2	3119	30 42 16	3137	29 14 51	3154
	Venus	E.	40 33 38	3481	39 12 53	3498	37 52 27	3516	36 32 21	3535
	Sun	E.	86 38 51	3365	85 15 55	3377	83 53 12	3387	82 30 41	3397
28	Pollux	W.	90 22 47	3043	91 52 7	3048	93 21 20	3055	94 50 25	3060
	Regulus	W.	53 29 52	3037	54 59 19	3043	56 28 38	3049	57 57 50	3055
	Jupiter	E.	22 3 28	3264	20 38 34	3294	19 14 15	3330	17 50 38	3372
	Venus	E.	29 57 0	3634	28 39 2	3657	27 21 29	3682	26 4 23	3710
	Sun	E.	75 40 43	3440	74 19 12	3447	72 57 48	3452	71 36 31	3460
29	Pollux	W.	102 14 24	3080	103 42 58	3083	105 11 28	3085	106 39 56	3087
	Regulus	W.	65 22 22	3074	66 51 3	3077	68 19 40	3079	69 48 15	3081
	Venus	E.	19 47 31	3917	18 34 28	3981	17 22 30	4063	16 11 52	4162
	Sun	E.	64 51 39	3482	63 30 55	3486	62 10 15	3488	60 49 37	3490
30	Regulus	W.	77 10 47	3083	78 39 17	3083	80 7 47	3082	81 36 18	3081
	Spica $\mathfrak{M}$	W.	23 12 14	3091	24 40 34	3091	26 8 55	3089	27 37 18	3087
	Sun	E.	54 6 59	3496	52 46 39	3496	51 26 1	3495	50 5 31	3495
31	Regulus	W.	88 59 29	3069	90 28 17	3065	91 57 10	3061	93 26 7	3058
	Spica $\mathfrak{M}$	W.	35 0 0	3072	36 28 44	3069	37 57 32	3065	39 26 25	3061
	Sun	E.	43 22 42	3486	42 2 2	3484	40 41 20	3480	39 20 34	3478

## JANUARY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.							
	Apparent Right Ascension.			Apparent Declination.			Meridian	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	19	0	13.37	S.23	32	4.3	0	18.4
2	19	5	41.46	23	25	55.0	0	19.9
3	19	11	8.99	23	19	2.3	0	21.4
4	19	16	35.89	23	11	26.5	0	22.9
5	19	22	2.12	23	3	7.9	0	24.4
6	19	27	27.62	22	54	6.9	0	25.9
7	19	32	52.33	22	44	23.7	0	27.4
8	19	38	16.22	22	33	58.8	0	28.8
9	19	43	39.25	22	22	52.7	0	30.2
10	19	49	1.35	22	11	5.8	0	31.7
11	19	54	22.50	21	58	38.7	0	33.1
12	19	59	42.65	21	45	31.8	0	34.5
13	20	5	1.75	21	31	45.8	0	35.9
14	20	10	19.78	21	17	21.0	0	37.2
15	20	15	36.69	21	2	18.2	0	38.5
16	20	20	52.45	20	46	37.8	0	39.9
17	20	26	7.03	20	30	20.6	0	41.2
18	20	31	20.42	20	13	27.3	0	42.5
19	20	36	32.57	19	55	58.4	0	43.7
20	20	41	43.49	19	37	54.8	0	44.9
21	20	46	53.14	19	19	17.1	0	46.1
22	20	52	1.53	19	0	6.0	0	47.4
23	20	57	8.63	18	40	22.3	0	48.6
24	21	2	14.45	18	20	6.6	0	49.8
25	21	7	18.97	17	59	19.6	0	50.9
26	21	12	22.19	17	38	2.2	0	52.0
27	21	17	24.13	17	16	15.0	0	53.1
28	21	22	24.78	16	53	58.9	0	51.1
29	21	27	24.14	16	31	14.6	0	55.1
30	21	32	22.22	16	8	2.8	0	56.1
31	21	37	19.04	15	44	24.3	0	57.2
32	21	42	14.61	S.15	20	19.9	0	58.2

## FEBRUARY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.							
	Apparent Right Ascension.			Apparent Declination.			Meridian	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	21	42	14.61	S. 15	20	19.9	0	58.2
2	21	47	8.94	14	55	50.3	0	59.2
3	21	52	2.06	14	30	56.4	1	0.1
4	21	56	53.98	14	5	38.7	1	1.0
5	22	1	44.73	13	39	58.1	1	1.9
6	22	6	34.33	13	13	55.5	1	2.9
7	22	11	22.81	12	47	31.4	1	3.7
8	22	16	10.18	12	20	46.8	1	4.5
9	22	20	56.48	11	53	42.4	1	5.4
10	22	25	41.73	11	26	19.0	1	6.2
11	22	30	25.95	10	58	37.4	1	7.0
12	22	35	9.18	10	30	38.5	1	7.7
13	22	39	51.43	10	2	23.0	1	8.5
14	22	44	32.74	9	33	51.8	1	9.3
15	22	49	13.14	9	5	5.6	1	10.0
16	22	53	52.67	8	36	5.1	1	10.7
17	22	58	31.36	8	6	51.2	1	11.4
18	23	3	9.25	7	37	24.5	1	12.1
19	23	7	46.37	7	7	46.0	1	12.8
20	23	12	22.76	6	37	56.4	1	13.5
21	23	16	58.46	6	7	56.5	1	14.1
22	23	21	33.51	5	37	46.9	1	14.7
23	23	26	7.93	5	7	28.6	1	15.3
24	23	30	41.78	4	37	2.3	1	16.0
25	23	35	15.09	4	6	28.7	1	16.6
26	23	39	47.90	3	35	48.6	1	17.2
27	23	44	20.26	3	5	2.6	1	17.8
28	23	48	52.22	2	34	11.6	1	18.4
29	23	53	23.81	S. 2	3	16.2	1	19.0

## MARCH, 1839.

## MEAN TIME.

## APRIL, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.			Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian		Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.		Noon.	Noon.	Passage.
	h m s	° ' "	h m		h m s	° ' "	h m
1	23 53 23·81	S. 2 3 16·2	1 19·0	1	2 14 33·32	N. 13 24 35·4	1 38·0
2	23 57 55·08	1 32 17·3	1 19·6	2	2 19 14·85	13 51 21·0	1 38·7
3	0 2 26·07	1 1 15·4	1 20·2	3	2 23 57·23	14 17 46·5	1 39·5
4	0 6 56·84	S. 0 30 11·3	1 20·8	4	2 23 40·54	14 43 51·3	1 40·3
5	0 11 27·43	N. 0 0 54·3	1 21·3	5	2 33 24·77	15 9 34·7	1 41·1
6	0 15 57·87	0 32 0·6	1 21·9	6	2 38 9·96	15 34 55·9	1 41·9
7	0 20 28·23	1 3 6·9	1 22·5	7	2 42 56·13	15 59 54·2	1 42·7
8	0 24 58·52	1 34 12·5	1 23·0	8	2 47 43·28	16 24 28·8	1 43·6
9	0 29 28·81	2 5 16·6	1 23·6	9	2 52 31·44	16 48 39·0	1 44·5
10	0 33 59·14	2 36 18·6	1 24·2	10	2 57 20·61	17 12 24·0	1 45·3
11	0 38 29·54	3 7 17·6	1 24·7	11	3 2 10·80	17 35 43·2	1 46·2
12	0 43 0·04	3 38 13·0	1 25·3	12	3 7 2·03	17 58 35·7	1 47·1
13	0 47 30·71	4 9 4·0	1 25·9	13	3 11 54·29	18 21 0·9	1 48·0
14	0 52 1·57	4 39 49·8	1 26·4	14	3 16 47·60	18 42 57·9	1 49·0
15	0 56 32·67	5 10 29·6	1 27·0	15	3 21 41·95	19 4 26·1	1 50·0
16	1 1 4·04	5 41 2·8	1 27·6	16	3 26 37·34	19 25 24·8	1 50·9
17	1 5 35·73	6 11 28·5	1 28·2	17	3 31 33·76	19 45 53·4	1 51·9
18	1 10 7·77	6 41 46·1	1 28·8	18	3 36 31·20	20 5 51·0	1 52·9
19	1 14 40·20	7 11 54·7	1 29·4	19	3 41 29·65	20 25 17·0	1 54·0
20	1 19 13·06	7 41 53·7	1 30·0	20	3 46 29·10	20 44 10·9	1 55·1
21	1 23 46·39	8 11 42·3	1 30·6	21	3 51 29·52	21 2 32·0	1 56·2
22	1 28 20·21	8 41 19·7	1 31·2	22	3 56 30·91	21 20·19·3	1 57·2
23	1 32 54·57	9 10 45·2	1 31·8	23	4 1 33·24	21 37 32·4	1 58·3
24	1 37 29·50	9 39 58·0	1 32·5	24	4 6 36·48	21 54 11·0	1 59·4
25	1 42 5·02	10 8 57·4	1 33·2	25	4 11 40·62	22 10 14·3	2 0·5
26	1 46 41·18	10 37 42·6	1 33·8	26	4 16 45·62	22 25 41·3	2 1·7
27	1 51 18·00	11 6 12·9	1 34·5	27	4 21 51·47	22 40 32·0	2 2·9
28	1 55 55·53	11 34 27·6	1 35·2	28	4 26 58·12	22 54 45·8	2 4·0
29	2 0 33·80	12 2 25·9	1 35·8	29	4 32 5·55	23 8 22·3	2 5·2
30	2 5 12·83	12 30 7·2	1 36·5	30	4 37 13·73	23 21 20·5	2 6·4
31	2 9 52·67	12 57 30·6	1 37·2	31	4 42 22·63	N. 23 33 40·5	2 7·6
32	2 14 33·32	N. 13 24 35·4	1 38·0				

## MAY, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			Apparent Declination.			Meridian Passage.	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	4	42	22.63	N.23	33	40.3	2	7.6
2	4	47	32.19	23	45	21.4	2	8.8
3	4	52	42.37	23	56	23.3	2	10.0
4	4	57	53.13	24	6	45.3	2	11.2
5	5	3	4.43	24	16	27.2	2	12.5
6	5	8	16.20	24	25	28.7	2	13.8
7	5	13	28.40	24	33	49.4	2	15.0
8	5	18	40.98	24	41	29.0	2	16.3
9	5	23	53.88	24	48	27.2	2	17.6
10	5	29	7.04	24	54	43.8	2	18.8
11	5	34	20.39	25	0	18.5	2	20.1
12	5	39	33.89	25	5	11.2	2	21.4
13	5	44	47.46	25	9	21.7	2	22.7
14	5	50	1.04	25	12	49.8	2	24.0
15	5	55	14.56	25	15	35.6	2	25.3
16	6	0	27.95	25	17	38.9	2	26.5
17	6	5	41.14	25	18	59.8	2	27.8
18	6	10	54.05	25	19	38.2	2	29.1
19	6	16	6.61	25	19	34.1	2	30.3
20	6	21	18.75	25	18	47.7	2	31.6
21	6	26	30.41	25	17	19.0	2	32.9
22	6	31	41.51	25	15	8.1	2	34.1
23	6	36	52.00	25	12	15.4	2	35.3
24	6	42	1.80	25	8	40.9	2	36.5
25	6	47	10.85	25	4	25.0	2	37.7
26	6	52	19.09	24	59	27.8	2	38.9
27	6	57	26.45	24	53	49.7	2	40.1
28	7	2	32.89	24	47	31.0	2	41.3
29	7	7	38.34	24	40	32.0	2	42.4
30	7	12	42.74	24	32	53.2	2	43.5
31	7	17	46.04	24	24	34.9	2	44.7
32	7	22	48.19	N.24	15	37.6	2	45.8

## JUNE, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			Apparent Declination.			Meridian Passage.	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	7	22	48.19	N.24	15	37.6	2	45.8
2	7	27	49.14	24	6	1.6	2	46.9
3	7	32	48.84	23	55	47.5	2	47.9
4	7	37	47.25	23	44	55.6	2	48.9
5	7	42	44.23	23	33	26.5	2	49.9
6	7	47	40.04	23	21	20.7	2	50.9
7	7	52	34.33	23	8	38.6	2	51.8
8	7	57	27.16	22	55	21.0	2	52.7
9	8	2	18.50	22	41	28.3	2	53.7
10	8	7	8.31	22	27	1.2	2	54.6
11	8	11	56.56	22	12	0.2	2	55.5
12	8	16	43.20	21	56	26.1	2	56.3
13	8	21	28.22	21	40	19.5	2	57.1
14	8	26	11.57	21	23	41.0	2	57.9
15	8	30	53.23	21	6	31.3	2	58.6
16	8	35	33.18	20	48	51.2	2	59.3
17	8	40	11.38	20	30	41.3	3	0.0
18	8	44	47.81	20	12	2.3	3	0.7
19	8	49	22.46	19	52	54.9	3	1.3
20	8	53	55.30	19	33	19.9	3	1.9
21	8	58	26.33	19	13	18.0	3	2.5
22	9	2	55.52	18	52	49.9	3	3.0
23	9	7	22.88	18	31	56.3	3	3.5
24	9	11	48.39	18	10	38.1	3	4.0
25	9	16	12.04	17	48	55.9	3	4.4
26	9	20	33.84	17	26	50.5	3	4.8
27	9	24	53.77	17	4	22.5	3	5.2
28	9	29	11.83	16	41	32.8	3	5.5
29	9	33	28.03	16	18	22.0	3	5.8
30	9	37	42.37	15	54	50.8	3	6.2
31	9	41	54.86	N.15	31	0.0	3	6.4

## JULY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.							
	Apparent Right Ascension.			Apparent Declination.			Meridian	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	9	41	54.86	N 15	31	0.0	3	6.4
2	9	46	5.48	15	6	50.2	3	6.6
3	9	50	14.25	14	42	22.1	3	6.9
4	9	54	21.18	14	17	36.4	3	7.1
5	9	58	26.27	13	52	33.9	3	7.3
6	10	2	29.52	13	27	15.2	3	7.4
7	10	6	30.95	13	1	41.1	3	7.4
8	10	10	30.55	12	35	52.2	3	7.5
9	10	14	28.32	12	9	49.3	3	7.5
10	10	18	24.27	11	43	33.1	3	7.5
11	10	22	18.40	11	17	4.3	3	7.4
12	10	26	10.71	10	50	23.6	3	7.4
13	10	30	1.18	10	23	31.8	3	7.3
14	10	33	49.81	9	56	29.6	3	7.2
15	10	37	36.59	9	29	17.9	3	7.0
16	10	41	21.52	9	1	57.3	3	6.8
17	10	45	4.59	8	34	28.5	3	6.6
18	10	48	45.80	8	6	52.4	3	6.3
19	10	52	25.14	7	39	9.6	3	6.0
20	10	56	2.60	7	11	20.8	3	5.7
21	10	59	38.17	6	43	26.8	3	5.4
22	11	3	11.84	6	15	28.3	3	5.0
23	11	6	43.59	5	47	26.0	3	4.6
24	11	10	13.42	5	19	20.7	3	4.1
25	11	13	41.30	4	51	13.0	3	3.6
26	11	17	7.22	4	23	3.7	3	3.1
27	11	20	31.16	3	54	53.5	3	2.6
28	11	23	53.11	3	26	43.0	3	2.0
29	11	27	13.04	2	58	32.9	3	1.4
30	11	30	30.94	2	30	23.8	3	0.7
31	11	33	46.78	2	2	16.4	3	0.0
32	11	37	0.54	N. 1	34	11.5	2	59.3

## AUGUST, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.								
	Apparent Right Ascension.			Apparent Declination.		Meridian			
	Noon.			Noon.		Passage.			
	h	m	s	°	'	''	h	m	
1	11	37	0.54	N.	1	34	11.5	2	59.3
2	11	40	12.18		1	6	9.6	2	58.6
3	11	43	21.67		0	38	11.6	2	57.8
4	11	46	28.98	N.	0	10	18.1	2	57.0
5	11	49	34.07	S.	0	17	30.2	2	56.1
6	11	52	36.87		0	45	12.5	2	55.2
7	11	55	37.35		1	12	48.1	2	54.3
8	11	58	35.43		1	40	16.1	2	53.3
9	12	1	31.06		2	7	35.8	2	52.2
10	12	4	24.16		2	34	46.4	2	51.1
11	12	7	14.66		3	1	46.9	2	50.1
12	12	10	2.48		3	28	36.5	2	48.9
13	12	12	47.53		3	55	14.4	2	47.7
14	12	15	29.71		4	21	39.5	2	46.5
15	12	18	8.94		4	47	51.0	2	45.2
16	12	20	45.10		5	13	47.8	2	43.9
17	12	23	18.07		5	39	29.0	2	42.5
18	12	25	47.75		6	4	53.6	2	41.0
19	12	28	14.00		6	30	0.4	2	39.5
20	12	30	36.70		6	54	48.5	2	37.9
21	12	32	55.71		7	19	16.6	2	36.3
22	12	35	10.88		7	43	23.8	2	34.6
23	12	37	22.07		8	7	8.7	2	32.8
24	12	39	29.13		8	30	30.1	2	31.0
25	12	41	31.90		8	53	26.9	2	29.1
26	12	43	30.22		9	15	57.9	2	27.1
27	12	45	23.93		9	38	1.7	2	25.1
28	12	47	12.86		9	59	37.1	2	23.0
29	12	48	56.81		10	20	42.5	2	20.7
30	12	50	35.62		10	41	16.5	2	18.4
31	12	52	9.08		11	1	17.5	2	16.0
32	12	53	37.01	S.	11	20	43.7	2	13.6

## SEPTEMBER, 1839.

## OCTOBER, 1839.

## MEAN TIME.

## MEAN TIME.

Day of the Month.	Geocentric.			Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian		Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.		Noon.	Noon.	Passage.
	h m s	° ' "	h m		h m s	° ' "	h m
1	12 53 37.01	S. 11 20 43.7	2 13.6	1	12 41 45.49	S. 13 29 6.7	$\left\{ \begin{smallmatrix} 0 & 3.6 \\ 23 & 57.6 \end{smallmatrix} \right\}$
2	12 54 59.19	11 39 33.6	2 11.0	2	12 39 40.70	13 13 7.4	23 51.6
3	12 56 15.42	11 57 45.1	2 8.3	3	12 37 34.23	12 55 55.6	23 45.6
4	12 57 25.48	12 15 16.5	2 5.5	4	12 35 26.95	12 37 36.8	23 39.5
5	12 58 29.17	12 32 5.8	2 2.6	5	12 33 19.73	12 18 16.9	23 33.4
6	12 59 26.24	12 48 10.8	1 59.6	6	12 31 13.44	11 58 2.3	23 27.4
7	13 0 16.49	13 3 29.2	1 56.6	7	12 29 8.94	11 37 0.1	23 21.5
8	13 0 59.69	13 17 58.6	1 53.3	8	12 27 7.04	11 15 17.5	23 15.6
9	13 1 35.63	13 31 36.8	1 49.9	9	12 25 8.53	10 53 2.0	23 9.8
10	13 2 4.10	13 44 20.9	1 46.5	10	12 23 14.21	10 30 21.9	23 4.0
11	13 2 24.89	13 56 8.3	1 42.9	11	12 21 24.83	10 7 25.3	22 58.4
12	13 2 37.82	14 6 56.1	1 39.2	12	12 19 41.05	9 44 20.0	22 52.9
13	13 2 42.72	14 16 41.8	1 35.3	13	12 18 3.47	9 21 13.5	22 47.4
14	13 2 39.42	14 25 22.3	1 31.3	14	12 16 32.66	8 58 13.8	22 42.1
15	13 2 27.81	14 32 55.1	1 27.2	15	12 15 9.10	8 35 28.2	22 36.9
16	13 2 7.78	14 39 16.8	1 22.9	16	12 13 53.26	8 13 3.9	22 31.8
17	13 1 39.28	14 44 24.7	1 18.4	17	12 12 45.52	7 51 7.4	22 26.9
18	13 1 2.30	14 48 15.9	1 13.8	18	12 11 46.20	7 29 45.2	22 22.1
19	13 0 16.87	14 50 48.1	1 9.2	19	12 10 55.52	7 9 2.8	22 17.5
20	12 59 23.07	14 51 58.6	1 4.3	20	12 10 13.68	6 49 5.3	22 13.1
21	12 58 21.04	14 51 45.1	0 59.3	21	12 9 40.81	6 29 56.9	22 8.8
22	12 57 10.99	14 50 5.7	0 54.3	22	12 9 17.02	6 11 41.8	22 4.5
23	12 55 53.18	14 46 58.8	0 49.1	23	12 9 2.34	5 54 23.6	22 0.5
24	12 54 27.94	14 42 23.3	0 43.8	24	12 8 56.74	5 38 5.0	21 56.6
25	12 52 55.69	14 36 18.6	0 38.3	25	12 9 0.14	5 22 47.9	21 52.8
26	12 51 16.88	14 28 44.3	0 32.7	26	12 9 12.46	5 8 34.5	21 49.3
27	12 49 32.05	14 19 40.7	0 27.0	27	12 9 33.58	4 55 26.2	21 45.9
28	12 47 41.81	14 9 9.0	0 21.3	28	12 10 3.34	4 43 23.7	21 42.5
29	12 45 46.82	13 57 11.0	0 15.4	29	12 10 41.55	4 32 27.2	21 39.3
30	12 43 47.79	13 43 49.2	0 9.5	30	12 11 28.01	4 22 37.2	21 36.2
31	12 41 45.49	S. 13 29 6.7	$\left\{ \begin{smallmatrix} 0 & 3.6 \\ 23 & 57.6 \end{smallmatrix} \right\}$	31	12 12 22.53	4 13 53.6	21 33.3
				32	12 13 24.85	S. 4 6 15.8	21 30.6

## NOVEMBER, 1839.

## MEAN TIME.

## Geocentric.

Geocentric.												
Day of the Month.	Apparent Right Ascension.						Apparent Declination.			Meridian Passage.		
	Noon.						Noon.			Passage.		
	h	m	s				°	'	"	h	m	s
1	12	13	24.85	S.	4	6	15.8	21	30.6			
2	12	14	34.73		3	59	42.9	21	28.0			
3	12	15	51.94		3	54	14.2	21	25.4			
4	12	17	16.24		3	49	48.7	21	23.0			
5	12	18	47.38		3	46	25.2	21	20.7			
6	12	20	25.12		3	44	2.4	21	18.4			
7	12	22	9.21		3	42	38.9	21	16.3			
8	12	23	59.42		3	42	13.2	21	14.3			
9	12	25	55.53		3	42	43.8	21	12.3			
10	12	27	57.30		3	44	9.3	21	10.5			
11	12	30	4.53		3	46	28.2	21	8.9			
12	12	32	17.01		3	49	38.8	21	7.3			
13	12	34	34.54		3	53	39.5	21	5.7			
14	12	36	56.94		3	58	29.0	21	4.1			
15	12	39	24.01		4	4	5.5	21	2.6			
16	12	41	55.60		4	10	27.5	21	1.2			
17	12	44	31.53		4	17	33.5	20	59.9			
18	12	47	11.67		4	25	22.0	20	58.7			
19	12	49	55.86		4	33	51.5	20	57.5			
20	12	52	43.97		4	43	0.4	20	56.4			
21	12	55	35.84		4	52	47.3	20	55.5			
22	12	58	31.37		5	3	10.6	20	54.6			
23	13	1	30.40		5	14	8.7	20	53.7			
24	13	4	32.83		5	25	40.2	20	52.8			
25	13	7	38.53		5	37	43.6	20	52.0			
26	13	10	47.41		5	50	17.3	20	51.2			
27	13	13	59.36		6	3	19.9	20	50.5			
28	13	17	14.28		6	16	49.9	20	49.9			
29	13	20	32.07		6	30	45.9	20	49.3			
30	13	23	52.64		6	45	6.4	20	48.7			
31	13	27	15.91	S.	6	59	49.9	20	48.2			

## DECEMBER, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Geocentric.								
	Apparent Right Ascension.			Apparent Declination.			Meridian		
	Noon.			Noon.			Passage.		
	h	m	s	S.	°	'	"	h	m
1	13	27	15.91		6	59	49.9	20	48.2
2	13	30	41.79		7	14	55.1	20	47.7
3	13	34	10.21		7	30	20.6	20	47.3
4	13	37	41.10		7	46	5.0	20	46.9
5	13	41	14.37		8	2	7.0	20	46.5
6	13	44	49.98		8	18	25.3	20	46.2
7	13	48	27.87		8	34	58.6	20	46.0
8	13	52	7.98		8	51	45.7	20	45.8
9	13	55	50.26		9	8	45.3	20	45.5
10	13	59	34.67		9	25	56.3	20	45.4
11	14	3	21.16		9	43	17.5	20	45.3
12	14	7	9.70		10	0	47.7	20	45.1
13	14	11	0.27		10	18	25.8	20	45.0
14	14	14	52.83		10	36	10.6	20	44.9
15	14	18	47.35		10	54	1.1	20	44.9
16	14	22	43.82		11	11	56.2	20	45.0
17	14	26	42.21		11	29	54.7	20	45.1
18	14	30	42.51		11	47	55.7	20	45.2
19	14	34	44.71		12	5	58.0	20	45.3
20	14	38	48.77		12	24	0.7	20	45.5
21	14	42	54.69		12	42	2.5	20	45.6
22	14	47	2.45		13	0	2.5	20	45.8
23	14	51	12.03		13	17	59.6	20	46.0
24	14	55	23.41		13	35	52.7	20	46.3
25	14	59	36.58		13	53	40.7	40	46.6
26	15	3	51.53		14	11	22.6	20	46.9
27	15	8	8.23		14	28	57.3	20	47.3
28	15	12	26.67		14	46	23.7	20	47.7
29	15	16	46.82		15	3	41.0	20	48.1
30	15	21	8.68		15	20	48.0	20	48.5
31	15	25	32.22		15	37	43.8	20	49.0
32	15	29	57.43	S. 15	54	27.4	20	49.5	

## JANUARY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.					
	Apparent Right Ascension.		Apparent Declination.		Meridian	
	Noon.		Noon.		Passage.	
	h	m s	°	' "	h	m
1	11	47 16.93	N. 4	24 20.1	17	3.4
2	11	48 23.67	4	18 38.1	17	0.7
3	11	49 28.83	4	13 6.8	16	57.8
4	11	50 32.36	4	7 46.5	16	54.9
5	11	51 34.22	4	2 37.5	16	51.9
6	11	52 34.39	3	57 40.0	16	49.0
7	11	53 32.82	3	52 54.2	16	46.0
8	11	54 29.48	3	48 20.4	16	43.0
9	11	55 24.31	3	43 58.9	16	39.9
10	11	56 17.29	3	39 49.9	16	36.8
11	11	57 8.36	3	35 53.7	16	33.7
12	11	57 57.49	3	32 10.6	16	30.6
13	11	58 44.64	3	28 40.8	16	27.4
14	11	59 29.77	3	25 24.6	16	24.2
15	12	0 12.83	3	22 22.3	16	21.0
16	12	0 53.78	3	19 34.0	16	17.7
17	12	1 32.58	3	17 0.0	16	14.4
18	12	2 9.19	3	14 40.4	16	11.1
19	12	2 43.58	3	12 35.5	16	7.7
20	12	3 15.71	3	10 45.5	16	4.3
21	12	3 45.54	3	9 10.5	16	0.8
22	12	4 13.04	3	7 50.8	15	57.3
23	12	4 38.17	3	6 46.5	15	53.7
24	12	5 0.89	3	5 57.7	15	50.1
25	12	5 21.16	3	5 24.7	15	46.5
26	12	5 38.95	3	5 7.5	15	42.8
27	12	5 54.22	3	5 6.3	15	39.1
28	12	6 6.92	3	5 21.3	15	35.4
29	12	6 17.01	3	5 52.7	15	31.6
30	12	6 24.46	3	6 40.7	15	27.8
31	12	6 29.23	3	7 45.5	15	23.9
32	12	6 31.27	N. 3	9 7.1	15	20.0

## FEBRUARY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.					
	Apparent Right Ascension.		Apparent Declination.		Meridian	
	Noon.		Noon.		Passage.	
	h	m s	°	' "	h	m
1	12	6 31.27	N. 3	9 7.1	15	20.0
2	12	6 30.55	3	10 45.8	15	16.0
3	12	6 27.04	3	12 41.6	15	12.0
4	12	6 20.71	3	14 54.6	15	7.9
5	12	6 11.51	3	17 24.9	15	3.8
6	12	5 59.43	3	20 12.5	14	59.6
7	12	5 44.43	3	23 17.5	14	55.4
8	12	5 26.50	3	26 39.8	14	51.1
9	12	5 5.62	3	30 19.4	14	46.8
10	12	4 41.78	3	34 16.2	14	42.5
11	12	4 14.97	3	38 30.1	14	38.1
12	12	3 45.18	3	43 1.0	14	33.6
13	12	3 12.42	3	47 48.6	14	29.1
14	12	2 36.71	3	52 52.6	14	24.6
15	12	1 58.05	3	58 12.8	14	20.0
16	12	1 16.48	4	3 48.6	14	15.3
17	12	0 32.02	4	9 39.8	14	10.6
18	11	59 44.72	4	15 45.8	14	5.9
19	11	58 54.63	4	22 6.1	14	1.1
20	11	58 1.78	4	28 40.1	13	56.3
21	11	57 6.24	4	35 27.4	13	51.4
22	11	56 8.04	4	42 27.4	13	46.5
23	11	55 7.27	4	49 39.4	13	41.5
24	11	54 3.98	4	57 2.7	13	36.5
25	11	52 58.28	5	4 36.8	13	31.5
26	11	51 50.22	5	12 20.7	13	26.4
27	11	50 39.92	5	20 13.8	13	21.3
28	11	49 27.46	5	28 15.3	13	16.1
29	11	48 12.95	N. 5	36 24.3	13	10.9

## MARCH, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.							
	Apparent Right Ascension.			Apparent Declination.			Meridian	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	11	48	12.95	N. 5	36	24.3	13	10.9
2	11	46	56.49	5	44	39.9	13	5.7
3	11	45	38.19	5	53	1.2	13	0.5
4	11	44	18.16	6	1	27.3	12	55.2
5	11	42	56.55	6	9	57.3	12	49.9
6	11	41	33.50	6	18	30.1	12	44.6
7	11	40	9.12	6	27	4.9	12	39.2
8	11	38	43.58	6	35	40.5	12	33.8
9	11	37	17.02	6	44	15.9	12	28.5
10	11	35	49.62	6	52	49.9	12	23.1
11	11	34	21.53	7	1	21.4	12	17.7
12	11	32	52.91	7	9	49.4	12	12.3
13	11	31	23.94	7	18	12.6	12	6.9
14	11	29	54.79	7	26	30.0	12	1.5
15	11	28	25.65	7	34	40.5	11	56.1
16	11	26	56.69	7	42	43.1	11	50.7
17	11	25	28.09	7	50	36.8	11	45.3
18	11	24	0.01	7	58	20.5	11	39.9
19	11	22	32.63	8	5	53.4	11	34.5
20	11	21	6.12	8	13	14.4	11	29.2
21	11	19	40.64	8	20	22.9	11	23.8
22	11	18	16.33	8	27	17.9	11	18.5
23	11	16	53.37	8	33	58.7	11	13.2
24	11	15	31.88	8	40	24.7	11	7.9
25	11	14	12.00	8	46	35.3	11	2.7
26	11	12	53.85	8	52	30.0	10	57.5
27	11	11	37.55	8	58	8.4	10	52.3
28	11	10	23.23	9	3	30.0	10	47.2
29	11	9	10.98	9	8	34.4	10	42.1
30	11	8	0.92	9	13	21.3	10	37.0
31	11	6	53.15	9	17	50.3	10	32.0
32	11	5	47.74	N. 9	22	1.4	10	27.0

## APRIL, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.								
	Apparent Right Ascension.			Apparent Declination.			Meridian		
	Noon.			Noon.			Passage.		
	h	m	s		°	'	"	h	m
1	11	5	47.74	N. 9	22	1.4	10	27.0	
2	11	4	44.78	9	25	54.1	10	22.0	
3	11	3	44.33	9	29	28.5	10	17.1	
4	11	2	46.46	9	32	44.4	10	12.3	
5	11	1	51.23	9	35	41.6	10	7.5	
6	11	0	58.71	9	38	20.2	10	2.7	
7	11	0	8.95	9	40	39.9	9	58.0	
8	10	59	22.01	9	42	40.8	9	53.3	
9	10	58	37.92	9	44	22.9	9	48.6	
10	10	57	56.71	9	45	46.1	9	44.0	
11	10	57	18.42	9	46	50.6	9	39.4	
12	10	56	43.06	9	47	36.4	9	34.9	
13	10	56	10.67	9	48	3.6	9	30.5	
14	10	55	41.24	9	48	12.3	9	26.1	
15	10	55	14.79	9	48	2.7	9	21.7	
16	10	54	51.33	9	47	34.8	9	17.4	
17	10	54	30.84	9	46	48.9	9	13.1	
18	10	54	13.32	9	45	45.3	9	8.9	
19	10	53	58.75	9	44	24.1	9	4.8	
20	10	53	47.11	9	42	45.7	9	0.7	
21	10	53	38.36	9	40	50.4	8	56.7	
22	10	53	32.48	9	38	38.3	8	52.7	
23	10	53	29.45	9	36	9.9	8	48.7	
24	10	53	29.21	9	33	25.4	8	44.8	
25	10	53	31.74	9	30	25.1	8	40.9	
26	10	53	37.00	9	27	9.3	8	37.1	
27	10	53	44.94	9	23	38.3	8	33.3	
28	10	53	55.52	9	19	52.4	8	29.6	
29	10	54	8.71	9	15	51.9	8	25.8	
30	10	54	24.47	9	11	37.1	8	22.1	
31	10	54	42.75	N. 9	7	8.1	8	18.5	

## MAY, 1839.

## MEAN TIME.

## Geocentric.

Apparent  
Right  
Ascension.Apparent  
Declination.

Meridian

Noon.

Noon.

Passage.

Day of the Month.

	h	m	s	°	'	''	h	m
1	10	54	42.75	N. 9	7	8.1	8	18.5
2	10	55	3.52	9	2	25.3	8	14.9
3	10	55	26.73	8	57	28.9	8	11.4
4	10	55	52.35	8	52	19.1	8	7.9
5	10	56	20.32	8	46	56.2	8	4.5
6	10	56	50.61	8	41	20.4	8	1.1
7	10	57	23.19	8	35	31.9	7	57.7
8	10	57	58.01	8	29	30.9	7	54.3
9	10	58	35.04	8	23	17.5	7	51.0
10	10	59	14.25	8	16	52.0	7	47.7
11	10	59	55.60	8	10	14.4	7	44.5
12	11	0	39.04	8	3	25.0	7	41.3
13	11	1	24.54	7	56	24.0	7	38.2
14	11	2	12.06	7	49	11.5	7	35.0
15	11	3	1.55	7	41	47.8	7	31.9
16	11	3	52.98	7	34	13.1	7	28.8
17	11	4	46.31	7	26	27.6	7	25.8
18	11	5	41.49	7	18	31.6	7	22.9
19	11	6	38.49	7	10	25.4	7	19.9
20	11	7	37.25	7	2	9.0	7	17.0
21	11	8	37.74	6	53	42.7	7	14.0
22	11	9	39.92	6	45	6.7	7	11.2
23	11	10	43.75	6	36	21.2	7	8.3
24	11	11	49.18	6	27	26.3	7	5.5
25	11	12	56.19	6	18	22.4	7	2.6
26	11	14	4.73	6	9	9.6	6	59.9
27	11	15	14.78	5	59	48.0	6	57.1
28	11	16	26.30	5	50	17.9	6	54.4
29	11	17	39.25	5	40	39.3	6	51.6
30	11	18	53.62	5	30	52.4	6	48.9
31	11	20	9.37	5	20	57.4	6	46.2
32	11	21	26.47	N. 5	10	54.4	6	43.5

## JUNE, 1839.

## MEAN TIME.

## Geocentric.

Apparent  
Right  
Ascension.Apparent  
Declination.

Meridian

Noon.

Noon.

Passage.

Day of the Month.

	h	m	s	°	'	''	h	m
1	11	21	26.47	N. 5	10	54.4	6	43.5
2	11	22	44.89	5	0	43.5	6	40.9
3	11	24	4.61	4	50	24.9	6	38.3
4	11	25	25.61	4	39	58.6	6	35.7
5	11	26	47.87	4	29	24.9	6	33.1
6	11	28	11.36	4	18	43.7	6	30.6
7	11	29	36.07	4	7	55.2	6	28.1
8	11	31	1.98	3	56	59.5	6	25.6
9	11	32	29.07	3	45	56.8	6	23.1
10	11	33	57.32	3	34	47.0	6	20.7
11	11	35	26.71	3	23	30.4	6	18.3
12	11	36	57.21	3	12	7.0	6	15.9
13	11	38	28.82	3	0	37.1	6	13.5
14	11	40	1.49	2	49	0.7	6	11.0
15	11	41	35.22	2	37	18.0	6	8.6
16	11	43	9.99	2	25	29.2	6	6.2
17	11	44	45.76	2	13	34.3	6	3.9
18	11	46	22.53	2	1	33.6	6	1.6
19	11	48	0.28	1	49	27.2	5	59.3
20	11	49	38.98	1	37	15.2	5	57.0
21	11	51	18.63	1	24	57.8	5	54.7
22	11	52	59.19	1	12	35.1	5	52.5
23	11	54	40.66	1	0	7.3	5	50.3
24	11	56	23.02	0	47	34.5	5	48.1
25	11	58	6.26	0	34	56.7	5	45.9
26	11	59	50.36	0	22	14.2	5	43.6
27	12	1	35.31	N. 0	9	26.9	5	41.4
28	12	3	21.11	S. 0	3	24.9	5	39.2
29	12	5	7.73	0	16	21.2	5	37.0
30	12	6	55.16	0	29	21.8	5	34.9
31	12	8	43.41	S. 0	42	26.5	5	32.8

## JULY, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Geocentric.							
	Apparent Right Ascension.			Apparent Declination.	Meridian			
	Noon.				Passage.			
	h	m	s	°		'	''	h
1	12	8	43.41	S. 0	42	26.5	5	32.8
2	12	10	32.46	0	55	35.4	5	30.7
3	12	12	22.31	1	8	48.3	5	28.6
4	12	14	12.96	1	22	5.1	5	26.5
5	12	16	4.40	1	35	25.8	5	24.5
6	12	17	56.64	1	48	50.3	5	22.4
7	12	19	49.65	2	2	18.5	5	20.4
8	12	21	43.44	2	15	50.2	5	18.3
9	12	23	38.00	2	29	25.4	5	16.3
10	12	25	33.33	2	43	3.9	5	14.3
11	12	27	29.42	2	56	45.6	5	12.3
12	12	29	26.26	3	10	30.4	5	10.2
13	12	31	23.84	3	24	18.1	5	8.3
14	12	33	22.16	3	38	8.6	5	6.3
15	12	35	21.22	3	52	1.8	5	4.4
16	12	37	21.00	4	5	57.5	5	2.4
17	12	39	21.50	4	19	55.6	5	0.5
18	12	41	22.72	4	33	56.0	4	58.6
19	12	43	24.66	4	47	58.5	4	56.7
20	12	45	27.29	5	2	3.0	4	54.7
21	12	47	30.63	5	16	9.3	4	52.9
22	12	49	34.66	5	30	17.2	4	51.0
23	12	51	39.39	5	44	26.7	4	49.2
24	12	53	44.80	5	58	37.6	4	47.3
25	12	55	50.90	6	12	49.8	4	45.5
26	12	57	57.67	6	27	3.1	4	43.7
27	13	0	5.13	6	41	17.5	4	41.9
28	13	2	13.27	6	55	32.7	4	40.0
29	13	4	22.09	7	9	48.7	4	38.2
30	13	6	31.59	7	24	5.3	4	36.4
31	13	8	41.79	7	38	22.5	4	34.6
32	13	10	52.67	S. 7	52	40.2	4	32.9

## AUGUST, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Geocentric.				
	Apparent Right Ascension.		Apparent Declination.	Meridian	
	Noon.		Noon.	Passage.	
	h	m s	° ' "	h m	
1	13	10 52.67	S. 7 52 40.2	4 32.9	
2	13	13 4.25	8 6 58.3	4 31.2	
3	13	15 16.54	8 21 16.6	4 29.5	
4	13	17 29.52	8 35 35.0	4 27.8	
5	13	19 43.21	8 49 53.4	4 26.0	
6	13	21 57.60	9 4 11.7	4 24.3	
7	13	24 12.70	9 18 29.7	4 22.6	
8	13	26 28.50	9 32 47.2	4 20.9	
9	13	28 45.01	9 47 4.2	4 19.3	
10	13	31 2.23	10 1 20.4	4 17.6	
11	13	33 20.16	10 15 35.7	4 15.9	
12	13	35 38.79	10 29 50.0	4 14.3	
13	13	37 58.14	10 44 3.0	4 12.7	
14	13	40 18.20	10 58 14.6	4 11.1	
15	13	42 38.97	11 12 24.7	4 9.5	
16	13	45 0.45	11 26 33.1	4 7.9	
17	13	47 22.63	11 40 39.6	4 6.4	
18	13	49 45.53	11 54 44.1	4 4.8	
19	13	52 9.13	12 8 46.3	4 3.3	
20	13	54 33.44	12 22 46.2	4 1.7	
21	13	56 58.45	12 36 43.6	4 0.2	
22	13	59 24.18	12 50 38.2	3 58.7	
23	14	1 50.61	13 4 30.0	3 57.2	
24	14	4 17.76	13 18 18.7	3 55.7	
25	14	6 45.62	13 32 4.3	3 54.3	
26	14	9 14.20	13 45 46.5	3 52.9	
27	14	11 43.51	13 59 25.3	3 51.4	
28	14	14 13.56	14 13 0.4	3 50.0	
29	14	16 44.33	14 26 31.7	3 48.5	
30	14	19 15.85	14 39 59.1	3 47.1	
31	14	21 48.12	14 53 22.4	3 45.7	
32	14	24 21.14	S. 15 6 41.5	3 44.3	

## SEPTEMBER, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.
	h m s	° ' "	h m
1	14 24 21.14	S. 15 6 41.5	3 44.3
2	14 26 54.91	15 19 56.2	3 42.9
3	14 29 29.44	15 33 6.4	3 41.5
4	14 32 4.73	15 46 11.8	3 40.2
5	14 34 40.79	15 59 12.3	3 38.8
6	14 37 17.60	16 12 7.7	3 37.5
7	14 39 55.19	16 24 57.8	3 36.2
8	14 42 33.54	16 37 42.4	3 34.9
9	14 45 12.67	16 50 21.3	3 33.6
10	14 47 52.56	17 2 54.4	3 32.3
11	14 50 33.23	17 15 21.4	3 31.1
12	14 53 14.67	17 27 42.2	3 29.8
13	14 55 56.88	17 39 56.4	3 28.6
14	14 58 39.85	17 52 4.1	3 27.3
15	15 1 23.59	18 4 4.9	3 26.1
16	15 4 8.09	18 15 58.7	3 24.9
17	15 6 53.35	18 27 45.2	3 23.7
18	15 9 39.36	18 39 24.3	3 22.6
19	15 12 26.13	18 50 55.8	3 21.4
20	15 15 13.66	19 2 19.4	3 20.2
21	15 18 1.93	19 13 35.1	3 19.1
22	15 20 50.96	19 24 42.5	3 18.0
23	15 23 40.74	19 35 41.5	3 16.9
24	15 26 31.26	19 46 32.0	3 15.8
25	15 29 22.55	19 57 13.8	3 14.7
26	15 32 14.60	20 7 46.6	3 13.6
27	15 35 7.41	20 18 10.4	3 12.6
28	15 38 0.99	20 28 25.0	3 11.5
29	15 40 55.32	20 38 30.0	3 10.5
30	15 43 50.41	20 48 25.5	3 9.4
31	15 46 46.25	S. 20 58 11.1	3 8.4

## OCTOBER, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.
	h m s	° ' "	h m
1	15 46 46.25	S. 20 58 11.1	3 8.4
2	15 49 42.84	21 7 46.7	3 7.4
3	15 52 40.18	21 17 12.1	3 6.4
4	15 55 38.26	21 26 27.0	3 5.5
5	15 58 37.08	21 35 31.4	3 4.6
6	16 1 36.64	21 44 24.9	3 3.7
7	16 4 36.93	21 53 7.4	3 2.8
8	16 7 37.95	22 1 38.8	3 1.8
9	16 10 39.69	22 9 58.8	3 0.9
10	16 13 42.14	22 18 7.1	3 0.0
11	16 16 45.29	22 26 3.7	2 59.1
12	16 19 49.12	22 33 48.4	2 58.2
13	16 22 53.64	22 41 20.9	2 57.3
14	16 25 58.83	22 48 41.1	2 56.4
15	16 29 4.68	22 55 48.9	2 55.6
16	16 32 11.18	23 2 43.9	2 54.8
17	16 35 18.31	23 9 26.1	2 54.0
18	16 38 26.07	23 15 55.3	2 53.2
19	16 41 34.44	23 22 11.3	2 52.4
20	16 44 43.41	23 28 13.9	2 51.6
21	16 47 52.98	23 34 3.0	2 50.8
22	16 51 3.13	23 39 38.4	2 50.0
23	16 54 13.86	23 45 0.0	2 49.2
24	16 57 25.15	23 50 7.7	2 48.5
25	17 0 37.01	23 55 1.2	2 47.8
26	17 3 49.42	23 59 40.6	2 47.1
27	17 7 2.36	24 4 5.5	2 46.4
28	17 10 15.82	24 8 15.9	2 45.6
29	17 13 29.79	24 12 11.7	2 44.9
30	17 16 44.26	24 15 52.7	2 44.2
31	17 19 59.22	24 19 18.8	2 43.5
32	17 23 14.64	S. 24 22 29.8	2 42.8

## NOVEMBER, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.					
	Apparent Right Ascension.	Apparent Declination.	Meridian			
	Noon.	Noon.	Passage.			
	h m s	° / "	h m			
1	17 23 14.64	S.24 22 29.8	2 42.8			
2	17 26 30.53	24 25 25.6	2 42.1			
3	17 29 46.86	24 28 6.2	2 41.4			
4	17 33 3.62	24 30 31.3	2 40.7			
5	17 36 20.79	24 32 40.9	2 40.1			
6	17 39 38.37	24 34 34.9	2 39.5			
7	17 42 56.32	24 36 13.1	2 38.9			
8	17 46 14.63	24 37 35.5	2 38.3			
9	17 49 33.28	24 38 42.0	2 37.6			
10	17 52 52.24	24 39 32.5	2 37.0			
11	17 56 11.51	24 40 7.0	2 36.4			
12	17 59 31.05	24 40 25.3	2 35.8			
13	18 2 50.85	24 40 27.4	2 35.1			
14	18 6 10.90	24 40 13.3	2 34.5			
15	18 9 31.17	24 39 42.9	2 33.9			
16	18 12 51.65	24 38 56.1	2 33.3			
17	18 16 13.31	24 37 52.9	2 32.7			
18	18 19 33.13	24 36 33.3	2 32.1			
19	18 22 54.10	24 34 57.2	2 31.5			
20	18 26 15.21	24 33 4.6	2 30.9			
21	18 29 36.43	24 30 55.5	2 30.3			
22	18 32 57.76	24 28 30.0	2 29.7			
23	18 36 19.17	24 25 47.9	2 29.1			
24	18 39 40.65	24 22 49.4	2 28.5			
25	18 43 2.18	24 19 34.3	2 28.0			
26	18 46 23.74	24 16 2.7	2 27.4			
27	18 49 45.32	24 12 14.7	2 26.8			
28	18 53 6.91	24 8 10.1	2 26.2			
29	18 56 28.47	24 3 49.1	2 25.6			
30	18 59 50.01	23 59 11.6	2 25.0			
31	19 3 11.50	S.23 54 17.8	2 24.4			

## DECEMBER, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.					
	Apparent Right Ascension.	Apparent Declination.	Meridian			
	Noon.	Noon.	Passage.			
	h m s	° / "	h m			
1	19 3 11.50	S.23 54 17.8	2 24.4			
2	19 6 32.94	23 49 7.5	2 23.8			
3	19 9 54.29	23 43 40.9	2 23.3			
4	19 13 15.56	23 37 58.0	2 22.7			
5	19 16 36.72	23 31 58.9	2 22.1			
6	19 19 57.75	23 25 43.7	2 21.5			
7	19 23 18.62	23 19 12.4	2 20.9			
8	19 26 39.34	23 12 25.2	2 20.3			
9	19 29 59.87	23 5 22.1	2 19.7			
10	19 33 20.20	22 58 3.3	2 19.1			
11	19 36 40.31	22 50 28.8	2 18.5			
12	19 40 0.19	22 42 38.7	2 17.9			
13	19 43 19.81	22 34 33.1	2 17.3			
14	19 46 39.18	22 26 12.2	2 16.7			
15	19 49 58.27	22 17 36.0	2 16.0			
16	19 53 17.08	22 8 44.7	2 15.4			
17	19 56 35.59	21 59 38.4	2 14.8			
18	19 59 53.79	21 50 17.2	2 14.2			
19	20 3 11.67	21 40 41.4	2 13.5			
20	20 6 29.22	21 30 51.0	2 12.9			
21	20 9 46.43	21 20 46.2	2 12.2			
22	20 13 3.29	21 10 27.1	2 11.6			
23	20 16 19.79	20 59 53.9	2 10.9			
24	20 19 35.93	20 49 6.6	2 10.2			
25	20 22 51.70	20 38 5.5	2 9.5			
26	20 26 7.09	20 26 50.6	2 8.8			
27	20 29 22.10	20 15 22.2	2 8.1			
28	20 32 36.72	20 3 40.4	2 7.4			
29	20 35 50.94	19 51 45.3	2 6.7			
30	20 39 4.76	19 39 37.2	2 6.0			
31	20 42 18.17	19 27 16.1	2 5.3			
32	20 45 31.18	S.19 14 42.3	2 4.6			

## JANUARY, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			Apparent Declination.			Meridian
	Noon.			Noon.			Passage.
	h	m	s	°	'	"	h m
1	13	5	9.24	S. 5	31	42.1	18 20.6
2	13	5	30.54	5	33	38.4	18 17.0
3	13	5	51.26	5	35	30.9	18 13.4
4	13	6	11.39	5	37	19.7	18 9.8
5	13	6	30.92	5	39	4.7	18 6.2
6	13	6	49.86	5	40	45.8	18 2.6
7	13	7	8.20	5	42	23.1	17 58.9
8	13	7	25.92	5	43	56.4	17 55.3
9	13	7	43.03	5	45	25.8	17 51.6
10	13	7	59.52	5	46	51.2	17 48.0
11	13	8	15.37	5	48	12.6	17 44.3
12	13	8	30.59	5	49	29.9	17 40.6
13	13	8	45.17	5	50	43.2	17 36.9
14	13	8	59.10	5	51	52.5	17 33.2
15	13	9	12.37	5	52	57.7	17 29.5
16	13	9	24.98	5	53	58.7	17 25.7
17	13	9	36.93	5	54	55.5	17 22.0
18	13	9	48.21	5	55	48.1	17 18.3
19	13	9	58.81	5	56	36.5	17 14.5
20	13	10	8.73	5	57	20.7	17 10.7
21	13	10	17.97	5	58	0.6	17 6.9
22	13	10	26.53	5	58	36.3	17 3.1
23	13	10	34.41	5	59	7.9	16 59.3
24	13	10	41.61	5	59	35.3	16 55.5
25	13	10	48.12	5	59	58.4	16 51.7
26	13	10	53.94	6	0	17.3	16 47.8
27	13	10	59.06	6	0	32.0	16 44.0
28	13	11	3.49	6	0	42.4	16 40.1
29	13	11	7.21	6	0	48.5	16 36.2
30	13	11	10.23	6	0	50.3	16 32.3
31	13	11	12.54	6	0	47.8	16 28.4
32	13	11	14.14	S. 6	0	41.0	16 24.5

## FEBRUARY, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			Apparent Declination.			Meridian
	Noon.			Noon.			Passage.
	h	m	s	°	'	"	h m
1	13	11	14.14	S. 6	0	41.0	16 24.5
2	13	11	15.05	6	0	30.0	16 20.6
3	13	11	15.25	6	0	14.7	16 16.7
4	13	11	14.74	5	59	55.1	16 12.7
5	13	11	13.51	5	59	31.2	16 8.7
6	13	11	11.58	5	59	3.0	16 4.8
7	13	11	8.94	5	58	30.6	16 0.8
8	13	11	5.59	5	57	53.9	15 56.8
9	13	11	1.52	5	57	12.9	15 52.8
10	13	10	56.75	5	56	27.7	15 48.8
11	13	10	51.27	5	55	38.3	15 44.8
12	13	10	45.08	5	54	44.6	15 40.7
13	13	10	38.19	5	53	46.7	15 36.6
14	13	10	30.60	5	52	44.6	15 32.6
15	13	10	22.31	5	51	38.3	15 28.5
16	13	10	13.34	5	50	28.0	15 24.4
17	13	10	3.69	5	49	13.6	15 20.3
18	13	9	53.36	5	47	55.3	15 16.2
19	13	9	42.36	5	46	33.0	15 12.1
20	13	9	30.69	5	45	6.8	15 8.0
21	13	9	18.37	5	43	36.7	15 3.8
22	13	9	5.40	5	42	2.8	14 59.6
23	13	8	51.79	5	40	25.2	14 55.5
24	13	8	37.55	5	38	43.9	14 51.3
25	13	8	22.68	5	36	58.9	14 47.1
26	13	8	7.19	5	35	10.3	14 42.9
27	13	7	51.09	5	33	18.2	14 38.7
28	13	7	34.40	5	31	28.6	14 34.5
29	13	7	17.11	S. 5	29	23.6	14 30.3

## MARCH, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.				Apparent Declination.			Meridian
	Noon.				Noon.			Passage.
	h	m	s		°	'	"	h m
1	13	7	17.11	S.	5	29	23.6	14 30.3
2	13	6	59.24		5	27	21.2	14 26.1
3	13	6	40.80		5	25	15.5	14 21.8
4	13	6	21.81		5	23	6.5	14 17.6
5	13	6	2.28		5	20	54.4	14 13.3
6	13	5	43.21		5	18	39.3	14 9.0
7	13	5	21.61		5	16	21.2	14 4.8
8	13	5	0.50		5	14	0.2	14 0.5
9	13	4	38.89		5	11	36.3	13 56.2
10	13	4	16.80		5	9	9.6	13 51.9
11	13	3	54.25		5	6	40.5	13 47.6
12	13	3	31.25		5	4	8.4	13 43.2
13	13	3	7.79		5	1	34.0	13 38.9
14	13	2	43.89		4	58	57.2	13 34.6
15	13	2	19.59		4	56	18.2	13 30.3
16	13	1	54.90		4	53	37.0	13 25.9
17	13	1	29.84		4	50	53.8	13 21.6
18	13	1	4.44		4	48	8.7	13 17.2
19	13	0	38.71		4	45	21.8	13 12.9
20	13	0	12.66		4	42	33.3	13 8.5
21	12	59	46.31		4	39	43.3	13 4.1
22	12	59	19.69		4	36	51.9	12 59.7
23	12	58	52.81		4	33	59.2	12 55.4
24	12	58	25.69		4	31	5.3	12 51.0
25	12	57	58.35		4	28	10.2	12 46.6
26	12	57	30.80		4	25	14.2	12 42.2
27	12	57	3.07		4	22	17.4	12 37.8
28	12	56	35.17		4	19	19.8	12 33.4
29	12	56	7.13		4	16	21.7	12 29.0
30	12	55	38.96		4	13	23.3	12 24.6
31	12	55	10.69		4	10	24.4	12 20.2
32	12	54	42.33	S.	4	7	25.2	12 15.8

## APRIL, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			S.	Apparent Declination.			Meridian
	Noon.				Noon.			Passage.
	h	m	s		°	'	"	h
1	12	54	42.33	4	7	25.2	12	15.8
2	12	54	13.90	4	4	26.0	12	11.4
3	12	53	45.43	4	1	26.7	12	7.0
4	12	53	16.92	3	58	27.6	12	2.6
5	12	52	48.42	3	55	28.7	11	58.2
6	12	52	19.91	3	52	30.2	11	53.8
7	12	51	51.43	3	49	32.3	11	49.4
8	12	51	23.01	3	46	35.1	11	45.0
9	12	50	54.65	3	43	38.6	11	40.6
10	12	50	26.38	3	40	42.9	11	36.2
11	12	49	58.22	3	37	48.2	11	31.8
12	12	49	30.19	3	34	54.6	11	27.4
13	12	49	2.31	3	32	2.4	11	23.0
14	12	48	34.60	3	29	11.6	11	18.6
15	12	48	7.08	3	26	22.4	11	14.2
16	12	47	39.78	3	23	34.8	11	9.8
17	12	47	12.72	3	20	49.0	11	5.4
18	12	46	45.91	3	18	5.1	11	1.1
19	12	46	19.36	3	15	23.3	10	56.7
20	12	45	53.09	3	12	43.7	10	52.4
21	12	45	27.13	3	10	6.3	10	48.0
22	12	45	1.49	3	7	31.2	10	43.7
23	12	44	36.18	3	4	58.5	10	39.3
24	12	44	11.22	3	2	28.3	10	35.0
25	12	43	46.63	3	0	0.8	10	30.6
26	12	43	22.42	2	57	36.1	10	26.3
27	12	42	58.60	2	55	14.1	10	22.0
28	12	42	35.19	2	52	54.9	10	17.6
29	12	42	12.21	2	50	38.7	10	13.3
30	12	41	49.67	2	48	25.6	10	9.0
31	12	41	27.58	S. 2	46	15.6	10	4.7

MAY, 1839.

JUNE, 1839.

MEAN TIME.

MEAN TIME.

Day of the Month.	Geocentric.			Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian		Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.		Noon.	Noon.	Passage.
	h m s	° / "	h m		h m s	° / "	h m
1	12 41 27.58	S. 2 46 15.6	10 4.7	1	12 34 40.45	S. 2 10 26.2	7 56.2
2	12 41 5.95	2 44 8.9	10 0.4	2	12 34 37.39	2 10 23.6	7 52.2
3	12 40 44.79	2 42 5.4	9 56.2	3	12 34 34.99	2 10 25.3	7 48.3
4	12 40 24.12	2 40 5.3	9 51.9	4	12 34 33.26	2 10 31.2	7 44.3
5	12 40 3.95	2 38 8.7	9 47.6	5	12 34 32.18	2 10 41.4	7 40.4
6	12 39 44.28	2 36 15.5	9 43.4	6	12 34 31.77	2 10 55.9	7 36.4
7	12 39 25.13	2 34 25.8	9 39.1	7	12 34 32.02	2 11 11.6	7 32.5
8	12 39 6.50	2 32 39.8	9 34.9	8	12 34 32.92	2 11 37.6	7 28.6
9	12 38 48.42	2 30 57.4	9 30.7	9	12 34 34.49	2 12 4.9	7 24.7
10	12 38 30.90	2 29 18.8	9 26.5	10	12 34 36.73	2 12 36.6	7 20.8
11	12 38 13.94	2 27 44.1	9 22.3	11	12 34 39.64	2 13 12.5	7 16.9
12	12 37 57.55	2 26 13.2	9 18.0	12	12 34 43.21	2 13 52.7	7 13.1
13	12 37 41.75	2 24 46.3	9 13.8	13	12 34 47.43	2 14 37.1	7 9.2
14	12 37 26.55	2 23 23.4	9 9.7	14	12 34 52.30	2 15 25.7	7 5.3
15	12 37 11.95	2 22 4.5	9 5.5	15	12 34 57.82	2 16 18.4	7 1.5
16	12 36 57.96	2 20 49.7	9 1.4	16	12 35 3.99	2 17 15.3	6 57.7
17	12 36 44.58	2 19 39.1	8 57.2	17	12 35 10.80	2 18 16.2	6 53.9
18	12 36 31.82	2 18 32.6	8 53.1	18	12 35 18.25	2 19 21.2	6 50.1
19	12 36 19.68	2 17 30.3	8 48.9	19	12 35 26.34	2 20 30.3	6 46.3
20	12 36 8.17	2 16 32.1	8 44.8	20	12 35 35.07	2 21 43.4	6 42.5
21	12 35 57.30	2 15 38.1	8 40.7	21	12 35 44.43	2 23 0.5	6 38.7
22	12 35 47.06	2 14 48.4	8 36.6	22	12 35 54.41	2 24 21.6	6 34.9
23	12 35 37.47	2 14 2.9	8 32.5	23	12 36 5.02	2 25 46.6	6 31.2
24	12 35 28.52	2 13 21.6	8 28.4	24	12 36 16.24	2 27 15.4	6 27.4
25	12 35 20.22	2 12 44.6	8 24.4	25	12 36 28.08	2 28 48.1	6 23.7
26	12 35 12.57	2 12 11.9	8 20.3	26	12 36 40.52	2 30 24.6	6 20.0
27	12 35 5.57	2 11 43.6	8 16.3	27	12 36 53.57	2 32 4.9	6 16.3
28	12 34 59.23	2 11 19.6	8 12.3	28	12 37 7.21	2 33 48.9	6 12.6
29	12 34 53.55	2 10 59.8	8 8.2	29	12 37 21.45	2 35 36.6	6 8.9
30	12 34 48.53	2 10 44.3	8 4.2	30	12 37 36.27	2 37 28.0	6 5.2
31	12 34 44.16	2 10 33.1	8 0.2	31	12 37 51.67	S. 2 39 23.0	6 1.5
32	12 34 40.45	S. 2 10 26.2	7 56.2				

## JULY, 1839.

## AUGUST, 1839.

## MEAN TIME.

## MEAN TIME.

Day of the Month.	Geocentric.			Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian		Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.		Noon.	Noon.	Passage.
	h m s	° ' "	h m		h m s	° ' "	h m
1	12 37 51.67	S. 2 39 23.0	6 1.5	1	12 50 13.67	S. 4 5 37.7	4 12.0
2	12 38 7.66	2 41 21.6	5 57.9	2	12 50 45.18	4 9 9.3	4 8.6
3	12 38 24.22	2 43 23.9	5 54.2	3	12 51 17.11	4 12 43.2	4 5.2
4	12 38 41.35	2 45 29.7	5 50.6	4	12 51 49.45	4 16 19.5	4 1.8
5	12 38 59.06	2 47 38.9	5 46.9	5	12 52 22.20	4 19 58.1	3 58.4
6	12 39 17.33	2 49 51.6	5 43.3	6	12 52 55.36	4 23 39.0	3 55.0
7	12 39 36.17	2 52 7.8	5 39.7	7	12 53 28.91	4 27 22.1	3 51.6
8	12 39 55.56	2 54 27.5	5 36.1	8	12 54 2.85	4 31 7.4	3 48.3
9	12 40 15.51	2 56 50.6	5 32.5	9	12 54 37.18	4 34 54.8	3 44.9
10	12 40 36.01	2 59 17.0	5 28.9	10	12 55 11.89	4 38 44.2	3 41.6
11	12 40 57.05	3 1 46.8	5 25.3	11	12 55 46.97	4 42 35.7	3 38.2
12	12 41 18.62	3 4 19.8	5 21.7	12	12 56 22.42	4 46 29.2	3 34.8
13	12 41 40.72	3 6 56.0	5 18.2	13	12 56 58.24	4 50 24.6	3 31.5
14	12 42 3.34	3 9 35.4	5 14.6	14	12 57 34.42	4 54 21.9	3 28.2
15	12 42 26.48	3 12 17.9	5 11.1	15	12 58 10.95	4 58 21.1	3 24.9
16	12 42 50.13	3 15 3.5	5 7.5	16	12 58 47.83	5 2 22.1	3 21.6
17	12 43 14.29	3 17 52.2	5 4.0	17	12 59 25.06	5 6 24.9	3 18.2
18	12 43 38.96	3 20 43.9	5 0.5	18	13 0 2.62	5 10 29.4	3 14.9
19	12 44 4.12	3 23 38.5	4 57.0	19	13 0 40.52	5 14 35.7	3 11.6
20	12 44 29.77	3 26 36.0	4 53.5	20	13 1 18.75	5 18 43.7	3 8.3
21	12 44 55.91	3 29 36.4	4 50.0	21	13 1 57.29	5 22 53.2	3 5.0
22	12 45 22.52	3 32 39.7	4 46.5	22	13 2 36.15	5 27 4.3	3 1.7
23	12 45 49.61	3 35 45.7	4 43.0	23	13 3 15.31	5 31 16.9	2 58.5
24	12 46 17.17	3 38 54.4	4 39.5	24	13 3 54.78	5 35 31.0	2 55.2
25	12 46 45.18	3 42 5.8	4 36.0	25	13 4 34.55	5 39 46.5	2 51.9
26	12 47 13.64	3 45 19.8	4 32.6	26	13 5 14.62	5 44 3.5	2 48.6
27	12 47 42.55	3 48 36.5	4 29.1	27	13 5 54.98	5 48 21.9	2 45.4
28	12 48 11.91	3 51 55.8	4 25.7	28	13 6 35.63	5 52 41.6	2 42.1
29	12 48 41.71	3 55 17.6	4 22.3	29	13 7 16.57	5 57 2.6	2 38.9
30	12 49 11.93	3 58 41.9	4 18.8	30	13 7 57.78	6 1 24.9	2 35.6
31	12 49 42.59	4 2 8.6	4 15.4	31	13 8 39.28	6 5 48.6	2 32.4
32	12 50 13.67	S. 4 5 37.7	4 12.0	32	13 9 21.06	S. 6 10 13.6	2 29.1

## SEPTEMBER, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian Passage.
	Noon.	Noon.	
	h m s	° ' "	h m
1	13 9 21.06	S. 6 10 13.6	2 29.1
2	13 10 3.11	6 14 39.7	2 25.9
3	13 10 45.42	6 19 7.0	2 22.7
4	13 11 27.99	6 23 35.4	2 19.4
5	13 12 10.82	6 28 4.8	2 16.2
6	13 12 53.89	6 32 35.3	2 13.0
7	13 13 37.21	6 37 6.8	2 9.8
8	13 14 20.77	6 41 39.3	2 6.6
9	13 15 4.57	6 46 12.7	2 3.4
10	13 15 48.60	6 50 47.0	2 0.2
11	13 16 32.85	6 55 22.1	1 57.0
12	13 17 17.32	6 59 58.0	1 53.8
13	13 18 2.02	7 4 34.7	1 50.6
14	13 18 46.93	7 9 12.1	1 47.4
15	13 19 32.05	7 13 50.2	1 44.2
16	13 20 17.37	7 18 29.0	1 41.1
17	13 21 2.88	7 23 8.5	1 37.9
18	13 21 48.58	7 27 48.5	1 34.7
19	13 22 34.47	7 32 29.0	1 31.5
20	13 23 20.53	7 37 10.0	1 28.4
21	13 24 6.78	7 41 51.4	1 25.2
22	13 24 53.20	7 46 33.3	1 22.1
23	13 25 39.78	7 51 15.6	1 18.9
24	13 26 26.53	7 55 58.2	1 15.7
25	13 27 13.45	8 0 41.2	1 12.6
26	13 28 0.53	8 5 24.5	1 9.5
27	13 28 47.77	8 10 8.1	1 6.3
28	13 29 35.17	8 14 52.1	1 3.2
29	13 30 22.71	8 19 36.3	1 0.0
30	13 31 10.40	8 24 20.7	0 56.9
31	13 31 58.23	S. 8 29 5.3	0 53.7

## OCTOBER, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian Passage.
	Noon.	Noon.	
	h m s	° ' "	h m
1	13 31 58.23	S. 8 29 5.3	0 53.7
2	13 32 46.19	8 33 49.9	0 50.6
3	13 33 34.28	8 38 34.6	0 47.4
4	13 34 22.49	8 43 19.3	0 44.3
5	13 35 10.83	8 48 4.1	0 41.2
6	13 35 59.28	8 52 48.9	0 38.1
7	13 36 47.84	* 8 57 33.6	0 34.9
8	13 37 36.51	9 2 18.2	0 31.8
9	13 38 25.29	9 7 2.8	0 28.7
10	13 39 14.17	9 11 47.2	0 25.6
11	13 40 3.14	9 16 31.4	0 22.4
12	13 40 52.20	9 21 15.3	0 19.3
13	13 41 41.34	9 25 59.0	0 16.2
14	13 42 30.55	9 30 42.3	0 13.1
15	13 43 19.84	9 35 25.3	0 10.0
16	13 44 9.20	9 40 7.9	0 6.9
17	13 44 58.61	9 44 50.1	0 3.8
18	13 45 48.08	9 49 31.9	{ 0 0.6 } 23 57 55 }
19	13 46 37.60	9 54 13.2	23 54.4
20	13 47 27.17	9 58 54.0	23 51.3
21	13 48 16.79	10 3 34.4	23 48.2
22	13 49 6.45	10 8 14.2	23 45.1
23	13 49 56.15	10 12 53.4	23 42.0
24	13 50 45.88	10 17 32.0	23 38.9
25	13 51 35.64	10 22 10.0	23 35.8
26	13 52 25.43	10 26 47.3	23 32.7
27	13 53 15.25	10 31 23.9	23 29.6
28	13 54 5.08	10 35 59.9	23 26.5
29	13 54 54.92	10 40 35.1	23 23.4
30	13 55 44.77	10 45 9.6	23 20.3
31	13 56 34.62	10 49 43.2	23 17.1
32	13 57 24.46	S. 10 54 15.9	23 14.0

## NOVEMBER, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			Apparent Declination.			Meridian Passage.	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	13	57	24.46	S.10	54	15.9	23	14.0
2	13	58	14.29		10	58	23	10.9
3	13	59	4.10		11	3	23	7.8
4	13	59	53.90		11	7	23	4.7
5	14	0	43.68		11	12	23	1.6
6	14	1	33.43		11	16	22	58.5
7	14	2	23.15		11	21	22	55.4
8	14	3	12.83		11	25	22	52.3
9	14	4	2.46		11	30	22	49.2
10	14	4	52.03		11	34	22	46.1
11	14	5	41.55		11	38	22	43.0
12	14	6	31.00		11	43	22	39.9
13	14	7	20.37		11	47	22	36.8
14	14	8	9.67		11	51	22	33.6
15	14	8	58.89		11	56	22	30.5
16	14	9	48.03		12	0	22	27.4
17	14	10	37.07		12	4	22	24.3
18	14	11	26.01		12	8	22	21.1
19	14	12	14.85		12	13	22	18.0
20	14	13	3.58		12	17	22	14.9
21	14	13	52.21		12	21	22	11.8
22	14	14	40.72		12	25	22	8.6
23	14	15	29.12		12	29	22	5.5
24	14	16	17.40		12	33	22	2.4
25	14	17	5.51		12	37	21	59.2
26	14	17	53.54		12	41	21	56.1
27	14	18	41.39		12	45	21	52.9
28	14	19	29.09		12	49	21	49.8
29	14	20	16.63		12	53	21	46.7
30	14	21	4.01		12	57	21	43.5
31	14	21	51.23	S.13	1	37.4	21	40.3

## DECEMBER, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			Apparent Declination.			Meridian Passage.	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	14	21	51.23	S.13	1	37.4	21	40.3
2	14	22	38.27		13	5	21	37.2
3	14	23	25.14		13	9	21	34.0
4	14	24	11.82		13	13	21	30.9
5	14	24	58.30		13	16	21	27.7
6	14	25	44.58		13	20	21	24.6
7	14	26	30.64		13	24	21	21.4
8	14	27	16.49		13	28	21	18.2
9	14	28	2.12		13	31	21	15.0
10	14	28	47.51		13	35	21	11.9
11	14	29	32.67		13	38	21	8.7
12	14	30	17.58		13	42	21	5.5
13	14	31	2.24		13	46	21	2.3
14	14	31	46.64		13	49	20	59.1
15	14	32	30.78		13	53	20	55.9
16	14	33	14.64		13	56	20	52.7
17	14	33	58.24		13	59	20	49.5
18	14	34	41.56		14	3	20	46.2
19	14	35	24.59		14	6	20	43.0
20	14	36	7.34		14	9	20	39.8
21	14	36	49.79		14	13	20	36.5
22	14	37	31.92		14	16	20	33.3
23	14	38	13.74		14	19	20	30.1
24	14	38	55.23		14	22	20	26.8
25	14	39	36.40		14	25	20	23.6
26	14	40	17.24		14	28	20	20.3
27	14	40	57.73		14	31	20	17.1
28	14	41	37.87		14	34	20	13.8
29	14	42	17.65		14	37	20	10.5
30	14	42	57.07		14	40	20	7.2
31	14	43	36.12		14	43	20	3.9
32	14	44	14.79	S.14	46	19.8	20	0.6

## JANUARY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.
	h m s	° ' "	h m
1	16 16 42.73	S.19 33 15.6	21 31.8
2	16 17 8.90	19 34 17.8	21 28.3
3	16 17 34.88	19 35 19.0	21 24.8
4	16 18 0.67	19 36 19.3	21 21.3
5	16 18 26.27	19 37 18.8	21 17.8
6	16 18 51.68	19 38 17.5	21 14.2
7	16 19 16.88	19 39 15.4	21 10.7
8	16 19 41.88	19 40 12.4	21 7.2
9	16 20 6.67	19 41 8.5	21 3.7
10	16 20 31.25	19 42 3.7	21 0.1
11	16 20 55.61	19 42 57.9	20 56.6
12	16 21 19.74	19 43 51.2	20 53.1
13	16 21 43.64	19 44 43.6	20 49.5
14	16 22 7.31	19 45 35.1	20 46.0
15	16 22 30.73	19 46 25.8	20 42.5
16	16 22 53.90	19 47 15.6	20 38.9
17	16 23 16.81	19 48 4.4	20 35.3
18	16 23 39.47	19 48 52.3	20 31.8
19	16 24 1.86	19 49 39.3	20 28.2
20	16 24 23.98	19 50 25.3	20 24.6
21	16 24 45.84	19 51 10.4	20 21.1
22	16 25 7.42	19 51 54.5	20 17.5
23	16 25 28.72	19 52 37.7	20 13.9
24	16 25 49.74	19 53 19.9	20 10.3
25	16 26 10.48	19 54 1.2	20 6.7
26	16 26 30.93	19 54 41.7	20 3.1
27	16 26 51.09	19 55 21.3	19 59.5
28	16 27 10.94	19 55 59.9	19 55.9
29	16 27 30.47	19 56 37.5	19 52.3
30	16 27 49.69	19 57 14.2	19 48.7
31	16 28 8.60	19 57 50.0	19 45.1
32	16 28 27.20	S.19 58 24.9	19 41.4

## FEBRUARY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian.
	Noon.	Noon.	Passage.
	h m s	° ' "	h m
1	16 28 27.20	S.19 58 24.9	19 41.4
2	16 28 45.48	19 58 58.8	19 37.8
3	16 29 3.44	19 59 31.8	19 34.2
4	16 29 21.06	20 0 3.8	19 30.5
5	16 29 38.36	20 0 34.8	19 26.9
6	16 29 55.33	20 1 4.9	19 23.2
7	16 30 11.96	20 1 34.1	19 19.5
8	16 30 28.25	20 2 2.3	19 15.9
9	16 30 44.18	20 2 29.6	19 12.2
10	16 30 59.75	20 2 56.0	19 8.5
11	16 31 14.96	20 3 21.5	19 4.9
12	16 31 29.81	20 3 46.1	19 1.2
13	16 31 44.30	20 4 9.7	18 57.5
14	16 31 58.42	20 4 32.3	18 53.8
15	16 32 12.16	20 4 54.0	18 50.1
16	16 32 25.52	20 5 14.7	18 46.3
17	16 32 38.50	20 5 34.5	18 42.6
18	16 32 51.11	20 5 53.4	18 38.9
19	16 33 3.33	20 6 11.3	18 35.2
20	16 33 15.16	20 6 28.3	18 31.4
21	16 33 26.60	20 6 44.3	18 27.7
22	16 33 37.66	20 6 59.5	18 23.9
23	16 33 48.32	20 7 13.8	18 20.2
24	16 33 58.58	20 7 27.2	18 16.4
25	16 34 8.44	20 7 39.7	18 12.6
26	16 34 17.91	20 7 51.4	18 8.8
27	16 34 26.97	20 8 2.2	18 5.0
28	16 34 35.62	20 8 12.0	18 1.2
29	16 34 43.87	S.20 8 20.8	17 57.4

## MARCH, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.					
	Apparent Right Ascension.	Apparent Declination.			Meridian	
	Noon.	Noon.			Passage.	
	h m s	° ' "		h m		
1	16 34 43·87	S.20 8 20·8		17 57·4		
2	16 34 51·70	20 8 28·7		17 53·6		
3	16 34 59·12	20 8 35·8		17 49·8		
4	16 35 6·14	20 8 42·0		17 46·0		
5	16 35 12·75	20 8 47·3		17 42·2		
6	16 35 18·94	20 8 51·7		17 38·3		
7	16 35 24·71	20 8 55·2		17 34·5		
8	16 35 30·06	20 8 57·9		17 30·7		
9	16 35 35·00	20 8 59·7		17 26·8		
10	16 35 39·51	20 9 0·7		17 22·9		
11	16 35 43·59	20 9 0·8		17 19·1		
12	16 35 47·24	20 9 0·0		17 15·2		
13	16 35 50·47	20 8 58·3		17 11·3		
14	16 35 53·26	20 8 55·8		17 7·4		
15	16 35 55·62	20 8 52·4		17 3·5		
16	16 35 57·57	20 8 48·2		16 59·6		
17	16 35 59·09	20 8 43·1		16 55·7		
18	16 36 0·18	20 8 37·1		16 51·8		
19	16 36 0·84	20 8 30·3		16 47·9		
20	16 36 1·08	20 8 22·7		16 44·0		
21	16 36 0·90	20 8 14·3		16 40·0		
22	16 36 0·30	20 8 5·2		16 36·0		
23	16 35 59·27	20 7 55·2		16 32·1		
24	16 35 57·83	20 7 44·4		16 28·1		
25	16 35 55·96	20 7 32·9		16 24·2		
26	16 35 53·68	20 7 20·6		16 20·2		
27	16 35 50·98	20 7 7·5		16 16·2		
28	16 35 47·86	20 6 53·6		16 12·2		
29	16 35 44·33	20 6 38·9		16 8·2		
30	16 35 40·39	20 6 23·4		16 4·2		
31	16 35 36·04	20 6 7·1		16 0·2		
32	16 35 31·29	S.20 5 50·1		15 56·2		

## APRIL, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.					
	Apparent Right Ascension.	Apparent Declination.			Meridian	
	Noon.	Noon.			Passage.	
	h m s	° ' "		h m		
1	16 35 31·29	S.20 5 50·1		15 56·2		
2	16 35 26·14	20 5 32·4		15 52·2		
3	16 35 20·59	20 5 13·9		15 48·2		
4	16 35 14·65	20 4 54·7		15 44·1		
5	16 35 8·32	20 4 34·8		15 40·1		
6	16 35 1·58	20 4 14·2		15 36·0		
7	16 34 54·45	20 3 52·9		15 32·0		
8	16 34 46·93	20 3 30·9		15 27·9		
9	16 34 39·03	20 3 8·2		15 23·9		
10	16 34 30·74	20 2 44·8		15 19·8		
11	16 34 22·08	20 2 20·7		15 15·7		
12	16 34 13·05	20 1 55·9		15 11·6		
13	16 34 3·65	20 1 30·4		15 7·5		
14	16 33 53·89	20 1 4·3		15 3·4		
15	16 33 43·78	20 0 37·5		14 59·3		
16	16 33 33·31	20 0 10·1		14 55·2		
17	16 33 22·50	19 59 42·1		14 51·1		
18	16 33 11·35	19 59 13·5		14 47·0		
19	16 32 59·87	19 58 44·4		14 42·9		
20	16 32 48·06	19 58 14·7		14 38·7		
21	16 32 35·93	19 57 44·4		14 34·6		
22	16 32 23·48	19 57 13·5		14 30·4		
23	16 32 10·73	19 56 42·1		14 26·3		
24	16 31 57·67	19 56 10·2		14 22·1		
25	16 31 44·31	19 55 37·8		14 18·0		
26	16 31 30·66	19 55 4·9		14 13·8		
27	16 31 16·74	19 54 31·4		14 9·7		
28	16 31 2·54	19 53 57·5		14 5·5		
29	16 30 48·07	19 53 23·1		14 1·3		
30	16 30 33·35	19 52 48·3		13 57·1		
31	16 30 18·38	S.19 52 13·0		13 52·9		

## MAY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.							
	Apparent Right Ascension.			Apparent Declination.			Meridian	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	16	30	18.38	S.19	52	13.0	13	52.9
2	16	30	3.17	19	51	37.3	13	48.7
3	16	29	47.71	19	51	1.1	13	44.6
4	16	29	32.01	19	50	24.6	13	40.4
5	16	29	16.09	19	49	47.7	13	36.2
6	16	28	59.94	19	49	10.5	13	32.0
7	16	28	43.58	19	48	32.9	13	27.8
8	16	28	27.03	19	47	55.0	13	23.6
9	16	28	10.28	19	47	16.7	13	19.4
10	16	27	53.34	19	46	38.1	13	15.2
11	16	27	36.23	19	45	59.2	13	10.9
12	16	27	18.95	19	45	20.0	13	6.7
13	16	27	1.51	19	44	40.6	13	2.5
14	16	26	43.93	19	44	1.0	12	58.3
15	16	26	26.22	19	43	21.2	12	54.0
16	16	26	8.38	19	42	41.3	12	49.8
17	16	25	50.43	19	42	1.2	12	45.6
18	16	25	32.36	19	41	21.0	12	41.4
19	16	25	14.19	19	40	40.7	12	37.1
20	16	24	55.93	19	40	0.3	12	32.9
21	16	24	37.58	19	39	19.8	12	28.6
22	16	24	19.16	19	38	39.2	12	24.4
23	16	24	0.69	19	37	58.6	12	20.2
24	16	23	42.16	19	37	17.9	12	15.9
25	16	23	23.59	19	36	37.2	12	11.7
26	16	23	4.99	19	35	56.6	12	7.4
27	16	22	46.36	19	35	16.0	12	3.2
28	16	22	27.72	19	34	35.5	11	59.0
29	16	22	9.08	19	33	55.1	11	54.7
30	16	21	50.44	19	33	14.8	11	50.5
31	16	21	31.81	19	32	34.6	11	46.2
32	16	21	13.20	S.19	31	54.6	11	42.0

## JUNE, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.							
	Apparent Right Ascension.			Apparent Declination.			Meridian	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	16	21	13.20	S.19	31	54.6	11	42.0
2	16	20	54.62	19	31	14.7	11	37.8
3	16	20	36.07	19	30	35.0	11	33.5
4	16	20	17.56	19	29	55.6	11	29.3
5	16	19	59.11	19	29	16.4	11	25.1
6	16	19	40.73	19	28	37.4	11	20.8
7	16	19	22.43	19	27	58.6	11	16.5
8	16	19	4.21	19	27	20.2	11	12.3
9	16	18	46.09	19	26	42.2	11	8.1
10	16	18	28.08	19	26	4.5	11	3.9
11	16	18	10.18	19	25	27.2	10	59.7
12	16	17	52.40	19	24	50.3	10	55.4
13	16	17	34.76	19	24	13.8	10	51.2
14	16	17	17.26	19	23	37.8	10	47.0
15	16	16	59.91	19	23	2.4	10	42.8
16	16	16	42.72	19	22	27.5	10	38.6
17	16	16	25.69	19	21	53.0	10	34.3
18	16	16	8.84	19	21	19.0	10	30.1
19	16	15	52.17	19	20	45.6	10	25.9
20	16	15	35.69	19	20	12.7	10	21.7
21	16	15	19.42	19	19	40.4	10	17.5
22	16	15	3.36	19	19	8.8	10	13.3
23	16	14	47.51	19	18	37.8	10	9.1
24	16	14	31.89	19	18	7.5	10	5.0
25	16	14	16.50	19	17	37.8	10	0.8
26	16	14	1.34	19	17	8.8	9	56.6
27	16	13	46.43	19	16	40.6	9	52.4
28	16	13	31.77	19	16	13.1	9	48.2
29	16	13	17.36	19	15	46.4	9	44.1
30	16	13	3.21	19	15	20.4	9	39.9
31	16	12	49.33	S.19	14	55.2	9	35.7

## JULY, 1839.

## MEAN TIME.

Day of the Month.	Geocentric. \		
	Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.
	h m s	° ' "	h m
1	16 12 49.33	S. 19 14 55.2	9 35.7
2	16 12 35.72	19 14 30.7	9 31.6
3	16 12 22.38	19 14 7.1	9 27.4
4	16 12 9.33	19 13 44.3	9 23.3
5	16 11 56.58	19 13 22.4	9 19.1
6	16 11 44.14	19 13 1.3	9 15.0
7	16 11 32.02	19 12 41.1	9 10.9
8	16 11 20.20	19 12 21.9	9 6.7
9	16 11 8.68	19 12 3.6	9 2.6
10	16 10 57.48	19 11 46.2	8 58.5
11	16 10 46.62	19 11 29.8	8 54.4
12	16 10 36.09	19 11 14.4	8 50.3
13	16 10 25.90	19 10 59.9	8 46.2
14	16 10 16.06	19 10 46.4	8 42.1
15	16 10 6.56	19 10 33.9	8 38.0
16	16 9 57.41	19 10 22.4	8 33.9
17	16 9 48.62	19 10 11.9	8 29.9
18	16 9 40.19	19 10 2.4	8 25.8
19	16 9 32.12	19 9 54.0	8 21.7
20	16 9 24.42	19 9 46.6	8 17.7
21	16 9 17.10	19 9 40.2	8 13.6
22	16 9 10.15	19 9 34.9	8 9.5
23	16 9 3.58	19 9 30.7	8 5.5
24	16 8 57.38	19 9 27.6	8 1.5
25	16 8 51.55	19 9 25.5	7 57.5
26	16 8 46.10	19 9 24.5	7 53.5
27	16 8 41.04	19 9 24.6	7 49.5
28	16 8 36.36	19 9 25.8	7 45.5
29	16 8 32.06	19 9 28.1	7 41.4
30	16 8 28.15	19 9 31.4	7 37.4
31	16 8 24.63	19 9 35.8	7 33.4
32	16 8 21.51	S. 19 9 41.2	7 29.5

## AUGUST, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.
	h m s	° ' "	h m
1	16 8 21.51	S. 19 9 41.2	7 29.5
2	16 8 18.78	19 9 47.8	7 25.5
3	16 8 16.46	19 9 55.5	7 21.5
4	16 8 14.53	19 10 4.3	7 17.6
5	16 8 13.01	19 10 14.2	7 13.6
6	16 8 11.89	19 10 25.2	7 9.7
7	16 8 11.17	19 10 37.4	7 5.7
8	16 8 10.85	19 10 50.7	7 1.8
9	16 8 10.94	19 11 5.1	6 57.9
10	16 8 11.43	19 11 20.7	6 53.9
11	16 8 12.32	19 11 37.3	6 50.0
12	16 8 13.62	19 11 55.0	6 46.1
13	16 8 15.32	19 12 13.7	6 42.2
14	16 8 17.43	19 12 33.6	6 38.3
15	16 8 19.95	19 12 54.6	6 34.4
16	16 8 22.87	19 13 16.6	6 30.5
17	16 8 26.20	19 13 39.7	6 26.7
18	16 8 29.94	19 14 3.8	6 22.8
19	16 8 34.08	19 14 28.9	6 18.9
20	16 8 38.63	19 14 55.2	6 15.1
21	16 8 43.58	19 15 22.5	6 11.2
22	16 8 48.92	19 15 50.9	6 7.4
23	16 8 54.65	19 16 20.2	6 3.6
24	16 9 0.76	19 16 50.5	5 59.8
25	16 9 7.27	19 17 21.8	5 55.9
26	16 9 14.18	19 17 54.1	5 52.1
27	16 9 21.47	19 18 27.4	5 48.3
28	16 9 29.16	19 19 1.7	5 44.5
29	16 9 37.24	19 19 36.9	5 40.7
30	16 9 45.71	19 20 13.1	5 36.9
31	16 9 54.57	19 20 50.2	5 33.1
32	16 10 3.82	S. 19 21 28.3	5 29.3

## SEPTEMBER, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.
	h m s	° ' "	h m
1	16 10 3·82	S.19 21 28·3	5 29·3
2	16 10 13·45	19 22 7·3	5 25·6
3	16 10 23·46	19 22 47·2	5 21·8
4	16 10 33·85	19 23 28·1	5 18·0
5	16 10 44·61	19 24 9·9	5 14·3
6	16 10 55·75	19 24 52·5	5 10·5
7	16 11 7·26	19 25 36·0	5 6·8
8	16 11 19·14	19 26 20·3	5 3·1
9	16 11 31·39	19 27 5·5	4 59·3
10	16 11 44·01	19 27 51·5	4 55·6
11	16 11 57·00	19 28 38·3	4 51·9
12	16 12 10·35	19 29 25·8	4 48·2
13	16 12 24·06	19 30 14·1	4 44·5
14	16 12 38·12	19 31 3·2	4 40·8
15	16 12 52·54	19 31 53·0	4 37·1
16	16 13 7·31	19 32 43·6	4 33·4
17	16 13 22·42	19 33 35·0	4 29·7
18	16 13 37·88	19 34 27·0	4 26·1
19	16 13 53·67	19 35 19·7	4 22·4
20	16 14 9·79	19 36 13·0	4 18·7
21	16 14 26·24	19 37 7·0	4 15·1
22	16 14 43·02	19 38 1·7	4 11·4
23	16 15 0·12	19 38 56·9	4 7·8
24	16 15 17·54	19 39 52·7	4 4·1
25	16 15 35·28	19 40 49·0	4 0·5
26	16 15 53·34	19 41 45·9	3 56·9
27	16 16 11·71	19 42 43·4	3 53·2
28	16 16 30·40	19 43 41·5	3 49·6
29	16 16 49·39	19 44 40·1	3 46·0
30	16 17 8·69	19 45 39·2	3 42·4
31	16 17 28·29	S.19 46 38·9	3 38·8

## OCTOBER, 1839.

## MEAN TIME.

Day of the Month.	Geocentric.		
	Apparent Right Ascension.	Apparent Declination.	Meridian
	Noon.	Noon.	Passage.
	h m s	° ' "	h m
1	16 17 28·29	S.19 46 38·9	3 38·8
2	16 17 48·19	19 47 39·0	3 35·2
3	16 18 8·39	19 48 39·6	3 31·6
4	16 18 28·87	19 49 40·6	3 28·0
5	16 18 49·63	19 50 42·0	3 24·4
6	16 19 10·68	19 51 43·9	3 20·8
7	16 19 32·01	19 52 46·1	3 17·3
8	16 19 53·61	19 53 48·6	3 13·7
9	16 20 15·48	19 54 51·5	3 10·1
10	16 20 37·62	19 55 54·7	3 6·5
11	16 21 0·03	19 56 58·2	3 3·0
12	16 21 22·70	19 58 2·1	2 59·4
13	16 21 45·62	19 59 6·3	2 55·9
14	16 22 8·79	20 0 10·7	2 52·3
15	16 22 32·21	20 1 15·4	2 48·8
16	16 22 55·87	20 2 20·3	2 45·3
17	16 23 19·76	20 3 25·4	2 41·7
18	16 23 43·88	20 4 30·7	2 38·2
19	16 24 8·22	20 5 36·2	2 34·7
20	16 24 32·78	20 6 41·8	2 31·2
21	16 24 57·57	20 7 47·6	2 27·6
22	16 25 22·58	20 8 53·4	2 24·1
23	16 25 47·80	20 9 59·3	2 20·6
24	16 26 13·22	20 11 5·4	2 17·1
25	16 26 38·86	20 12 11·5	2 13·6
26	16 27 4·70	20 13 17·8	2 10·1
27	16 27 30·73	20 14 24·1	2 6·6
28	16 27 56·95	20 15 30·5	2 3·1
29	16 28 23·36	20 16 36·9	1 59·6
30	16 28 49·95	20 17 43·3	1 56·1
31	16 29 16·72	20 18 49·7	1 52·6
32	16 29 43·67	S.20 19 56·0	1 49·1

## NOVEMBER, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			Apparent Declination.			Meridian	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	16	29	43.67	S.20	19	56.0	1	49.1
2	16	30	10.79	20	21	2.3	1	45.6
3	16	30	38.07	20	22	8.5	1	42.1
4	16	31	5.51	20	23	14.6	1	38.6
5	16	31	33.11	20	24	20.7	1	35.2
6	16	32	0.87	20	25	26.6	1	31.7
7	16	32	28.78	20	26	32.4	1	28.2
8	16	32	56.83	20	27	38.1	1	24.8
9	16	33	25.03	20	28	43.7	1	21.3
10	16	33	53.36	20	29	49.1	1	17.9
11	16	34	21.82	20	30	54.3	1	14.4
12	16	34	50.39	20	31	59.3	1	10.9
13	16	35	19.08	20	33	4.1	1	7.4
14	16	35	47.88	20	34	8.7	1	4.0
15	16	36	16.79	20	35	13.1	1	0.6
16	16	36	45.80	20	36	17.2	0	57.1
17	16	37	14.90	20	37	21.0	0	53.7
18	16	37	44.10	20	38	24.5	0	50.2
19	16	38	13.39	20	39	27.7	0	46.8
20	16	38	42.77	20	40	30.6	0	43.3
21	16	39	12.24	20	41	33.2	0	39.9
22	16	39	41.78	20	42	35.5	0	36.5
23	16	40	11.30	20	43	37.5	0	33.0
24	16	40	41.07	20	44	39.1	0	29.6
25	16	41	10.81	20	45	40.4	0	26.1
26	16	41	40.61	20	46	41.4	0	22.7
27	16	42	10.46	20	47	42.0	0	19.3
28	16	42	40.36	20	48	42.2	0	15.8
29	16	43	10.31	20	49	42.0	0	12.4
30	16	43	40.30	20	50	41.3	0	9.0
31	16	44	10.32	S.20	51	40.2	0	5.5

## DECEMBER, 1839.

## MEAN TIME.

## Geocentric.

Day of the Month.	Apparent Right Ascension.			Apparent Declination.			Meridian	
	Noon.			Noon.			Passage.	
	h	m	s	°	'	"	h	m
1	16	44	10.32	S.20	51	40.2	0	5.5
2	16	44	40.37	20	52	38.7	{ <sub>23</sub> <sup>0</sup> 2.1 { 58.7 {	
3	16	45	10.45	20	53	36.8		
4	16	45	40.55	20	54	34.4	23	51.8
5	16	46	10.67	20	55	31.6	23	48.4
6	16	46	40.80	20	56	28.3	23	44.9
7	16	47	10.93	29	57	24.4	23	41.5
8	16	47	41.05	20	58	20.1	23	38.1
9	16	48	11.17	20	59	15.3	23	34.6
10	16	48	41.27	21	0	10.0	23	31.2
11	16	49	11.36	21	1	4.3	23	27.8
12	16	49	41.42	21	1	58.0	23	24.3
13	16	50	11.45	21	2	51.1	23	20.9
14	16	50	41.44	21	3	43.7	23	17.5
15	16	51	11.39	21	4	35.7	23	14.0
16	16	51	41.30	21	5	27.2	23	10.6
17	16	52	11.17	21	6	18.1	23	7.2
18	16	52	40.99	21	7	8.5	23	3.7
19	16	53	10.76	21	7	58.3	23	0.3
20	16	53	40.47	21	8	47.6	22	56.8
21	16	54	10.11	21	9	36.3	22	53.4
22	16	54	39.68	21	10	24.4	22	50.0
23	16	55	9.17	21	11	11.9	22	46.5
24	16	55	38.58	21	11	58.8	22	43.1
25	16	56	7.90	21	12	45.2	22	39.6
26	16	56	37.12	21	13	31.0	22	36.1
27	16	57	6.25	21	14	16.2	22	32.7
28	16	57	35.29	21	15	0.8	22	29.2
29	16	58	4.22	21	15	44.7	22	25.8
30	16	58	33.04	21	16	28.0	22	22.4
31	16	59	1.74	21	17	10.6	22	18.9
32	16	59	30.33	S.21	17	52.6	22	15.4

# 122 PARALLAXES AND SEMIDIAMETERS.

1839.					1839.				
VENUS.			MARS.		VENUS.			MARS.	
Mean Noon.	Semid.	Hor.Par.	Semid.	Hor.Par.	Mean Noon.	Semid.	Hor.Par.	Semid.	Hor.Par.
	"	"	"	"		"	"	"	"
Jan. <sup>new</sup> 1	4.8	5.0	4.0	7.8	July 5	9.4	9.8	3.3	6.4
6	4.8	5.0	4.2	8.1	10	9.9	10.3	3.3	6.3
11	4.9	5.0	4.4	8.5	15	10.4	10.8	3.2	6.1
16	4.9	5.1	4.6	8.9	20	11.0	11.4	3.1	6.0
21	4.9	5.1	4.8	9.3	25	11.6	12.0	3.0	5.8
26	4.9	5.1	5.0	9.7	30	12.3	12.8	3.0	5.7
31	4.9	5.1	5.3	10.2	Aug. 4	13.0	13.6	2.9	5.6
Feb. 5	5.0	5.2	5.5	10.6	9	13.9	14.4	2.8	5.5
10	5.0	5.2	5.7	11.1	14	14.9	15.5	2.8	5.4
15	5.0	5.2	6.0	11.6	19	16.0	16.6	2.7	5.3
20	5.1	5.3	6.2	12.0	24	17.2	17.9	2.7	5.2
25	5.1	5.3	6.4	12.3	29 <sup>n</sup>	18.6	19.4	2.6	5.1
March 2	5.2	5.4	6.5	12.6	Sept. 3	20.1	20.9	2.6	5.1
7	5.2	5.4	6.6	12.8	8	21.9	22.7	2.6	5.0
12	5.3	5.5	6.7	12.9	13	23.7	24.6	2.5	4.9
17	5.3	5.5	6.7	12.9	18	25.5	26.5	2.5	4.8
22	5.4	5.6	6.6	12.8	23	27.3	28.3	2.5	4.8
27	5.5	5.7	6.5	12.6	28	28.7	29.8	2.4	4.7
April 1	5.5	5.7	6.4	12.4	Oct. 3	29.6	30.8	2.4	4.6
6	5.6	5.8	6.2	12.0	8	29.6	30.7	2.4	4.6
11	5.7	5.9	6.0	11.6	13	29.0	30.0	2.3	4.5
16	5.8	6.0	5.8	11.2	18	27.6	28.7	2.3	4.5
21	5.9	6.1	5.6	10.8	23	26.0	27.0	2.3	4.5
26	6.0	6.3	5.4	10.4	28	24.2	25.1	2.3	4.4
May 1	6.2	6.4	5.2	10.0	Nov. 2	22.4	23.2	2.3	4.4
6	6.3	6.5	5.0	9.6	7	20.6	21.5	2.2	4.3
11	6.4	6.7	4.8	9.2	12	19.1	19.9	2.2	4.3
16	6.6	6.9	4.6	8.9	17	17.7	18.4	2.2	4.2
21	6.8	7.1	4.4	8.5	22	16.4	17.1	2.2	4.2
26	7.0	7.3	4.2	8.2	27	15.3	15.9	2.2	4.2
31	7.2	7.5	4.1	7.9	Dec. 2	14.3	14.9	2.1	4.1
June 5	7.5	7.8	4.0	7.7	7	13.5	14.0	2.1	4.1
10	7.7	8.0	3.8	7.4	12	12.7	13.2	2.1	4.1
15	8.0	8.3	3.7	7.2	17	12.0	12.5	2.1	4.0
20	8.3	8.6	3.6	7.0	22	11.4	11.8	2.1	4.0
25	8.7	9.0	3.5	6.8	27	10.8	11.2	2.1	4.0
30	9.0	9.4	3.4	6.6	32	10.3	10.7	2.1	4.0
July 5	9.4	9.8	3.3	6.4					

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- do do do with and without Bar Index, in Mahogany cases.
- Single do do do do do
- Plain double observation do do do
- Do. single do do
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- Amplitude do with and without Agate Cap and Steel Centres.
- An Improved Storm Compass, with extra gimballs well adapted for Steamboats, not being affected by the constant jar of the boat.
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- Mathematical Drawing Instruments, Shagreen Cases, highly finished.
- Do do Nourse skin do complete. [protractor.
- Do do do do with box wood scales and metal
- Do do do do with smaller number of instruments.
- Marine Barometers.
- Simpesometers.
- Thermometer for sea and land.
- Hour and Half Hour Glasses, with finely grained metal.
- Do do with prepared sand.
- Log Glasses, 14 and 28 seconds, with finely grained metal.
- Parallel Rules of Ebony, from 6 to 24 inch.
- Gunter's Scales, 2 ft. Satin and Box Wood.
- Do 1 ft.
- Gauging Rods.
- Brass Dividers.
- Measuring Tapes, 25 to 100 ft.
- Writing and Letter Paper, Log do. Quills, Pens, Ink Powder, Ink, Slates, Log Slates
- Penknives, Sailors' Knives, &c.